FEELINGS OF PSYCHOLOGICAL OWNERSHIP TOWARDS PRIVATE FORESTS

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ESIPUHE

Väitöskirjan esipuheen pitäisi kuulemma alkaa kuvauksella siitä, kuinka työn tekeminen on ollut polku, jota pitkin on hiihdetty ”kouluun” kesät ja talvet, ja jonka varrelle on sattunut opettavaisia ja antoisia kokemuksia. Tämä prosessi ei ole ollut suoraviivainen polku. Ennemminkin maaseudun tutkimuksen umpimetsää, jossa olen harhaillut etsien niitä kultahippuja tai suppilovahveroita, mitä milloinkin. Siinä harhaillessa jotkut asiat ja ilmiöt ovat kuitenkin alkaneet vaikuttaa enemmän omilta, oikeastaan tuntuneet tavallaan kuuluvan minulle. Ehkä jopa itsestään selvinä.

Metsät ovat aina olleet minulle henkilökohtaisesti merkityksellisiä. Eivätkä suinkaan taustakoulutuksen vuoksi, vaan ennen kaikkea hengähdyspaikkana. Paikkana rauhoittua ja elpyä. Jokapäiväiset metsälenkkini koirien kanssa ovat henkiselle hyvinvoinnilleni likipitäen välttämättömiä ja lähimetsäni minulle tärkeitä. Nehän tuntuvat vähän niin kuin omiltani. En kuitenkaan ole itse metsänomistaja ja suvunkin metsät sijaitsevat toisella puolen Suomea. Hyvinvointini on siis itseasiassa riippuvainen toisten, minulle tuntemattomien, henkilöiden metsistä. Ja silti minulla on vahvoja tunteita näitä alueita kohtaan. Närkästyn syvästi, jos näen puita katkotun tai polkuja roskatun. Mielenkiintoista – eikö vaan? Ehkä jopa ihan maaseutututkimuksenkin kannalta?

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Seinäjoella 07.03. 2019

Anne Matilainen

CONTENTS

LIST OF ORIGINAL ARTICLES

This thesis is based on the following original articles published in peer reviewed journals. The articles are referred to in the text by the Roman numerals I-III.

I. Matilainen, A., Pohja-Mykrä, M., Lähdesmäki, M., & Kurki, S. (2017). "I feel it is mine!"–Psychological ownership in relation to natural resources. *Journal of Environmental Psychology*, *51*, 31-45.

II. Lähdesmäki, M., & Matilainen, A. (2014). Born to be a forest owner? An empirical study of the aspects of psychological ownership in the context of inherited forests in Finland. *Scandinavian journal of Forest Research*, *29*(2), 101-110.

III. Matilainen, A., & Lähdesmäki, M. (2014). Nature-based tourism in private forests: Stakeholder management balancing the interests of entrepreneurs and forest owners?. *Journal of Rural Studies*, *35*, 70-79.

The original articles have been reprinted as annexes with the kind permission of their copyright holder.

Anne Matilainen was the lead author and corresponding author in Articles I and III. In Article II, both authors participated equally in the data analysis and writing process of the article. Matilainen was also responsible for research design and data collection in all articles in cooperation with Dr Merja Lähdesmäki. In Article I, the wildlife-watching-business data and a hunters' representative interview were collected by Dr Mari Pohja-Mykrä, who also contributed to the analysis of the wildlife-watching case. Prof Sami Kurki provided comments on Article I and participated in the development of the article idea.

ABSTRACT

This dissertation focuses on analysing the feelings of ownership that the owners and other users of forests have developed towards privately-owned forest resources. These resources play a major part in providing forest-based benefits to society, as a large proportion of the forests in Europe and the US are privately owned. Furthermore, the majority of privately-owned forests are owned by so called non-industrial private forest owners (NIPF), typically referring to individual persons or family forest owners. Therefore, the decisions the NIPF owners make regarding their forest resources have a direct impact on the availability of forest-based ecosystem services.

Due to the importance of the private forest resources at global, national and local levels, it is not surprising that a vast number of regulations and land use practices have been developed, that set the regulatory framework for the use of forests. Also, users other than the owners feel that they have the right to speak about the use of forests. Due to these demands and the expectations from the wider society, the forest owners do not have sole control over their forest areas. Thus, the ownership of forests cannot be directly compared to the ownership of cars or stocks, for example.

In the best case, the objectives of both private forest owners and various society's objectives for the use of forest resources could be met at the same time by matching the forest owners' values with the alternative needs users had for the resource. Managing the different expectations in a socially sustainable way necessitates a profound understanding of the forest owners' own objectives, values and motivations regarding their forests. However, previous research has shown that the forest owners' socio-demographic characteristics or the objectives of the use of forests no longer explain the values and behaviour very well. It has also been suggested that the traditional forest owner typologies capture only the most salient objectives and therefore do not properly reflect the forest owners' behaviour. Also, other approaches are needed.

This dissertation contributes to the abovementioned research by introducing a novel concept, psychological ownership, as a potential approach to understanding the possessive feelings towards privately-owned forest resources, and via that, a better understanding of the role of these feelings in the behaviour of forest owners and other forest users (in this case nature-based tourism entrepreneurs) . Psychological ownership is based on the idea that ownership should not be understood only as a legal construct, but also to include certain psychological elements i.e. to the feeling "it is mine". Originally, psychological ownership was introduced in the field of organizational research, but it has since been applied increasingly in other sectors. In this study, it is used as the theoretical background to understand the ownership feelings about private forest resources. Psychological ownership can also bring a new approach to study the co-operation relationships related to the use of forests by multiple stakeholders, for example, when introducing new potential uses of forest resources (in this case nature-based entrepreneurs).

The study is qualitative in nature and the data consist of thematic interviews with private forest owners and nature tourism entrepreneurs. The results summarise the findings from three published journal articles. They show that both the legal owners and the nature-based entrepreneurs utilizing private forest areas seem to have developed psychological ownership feelings towards these forests. However, these feelings are not necessarily dependent on the legal ownership of the resource. Furthermore, the psychological ownership experienced seems to influence the behaviour of the persons expressing these feelings, for example, related to the private forest owners' forest management decisions. The results also illustrate that recognizing psychological ownership can help in understanding successful co-operation relationships and potential conflict situations relating to the multiple use of forest resources. In practice, it could help to foresee or even manage the potential conflicts. However, before psychological ownership can serve as a proper "management tool" in these situations, further research is warranted.

Key words: non-industrial private forest owners, psychological ownership, nature tourism, nature-based entrepreneurship, conflict, stakeholder management

TIIVISTELMÄ

Metsät tarjoavat yhteiskunnalle runsaasti erilaisia hyötyjä. Osa näistä on taloudellisia, kuten esimerkiksi puun kasvatukseen ja jalostukseen perustuvat arvoketjut, mutta metsät tarjoavat myös muun muassa virkistyshyötyjä, ilmastohyötyjä, luonnontuotteita ja suojeluarvoja. Euroopassa, samoin kuin Yhdysvalloissa, suurin osa näitä hyötyjä tuottavista metsävaroista on kuitenkin yksityisten perhemetsänomistajien omistuksessa. Metsävaroista yhteiskunnalle koituvat hyödyt siis tavallaan tuotetaan yksityisten metsänomistajien mailla. Näin ollen päätöksillä, joita yksityiset metsänomistajat tekevät metsiensä käytön suhteen on laajempaa merkitystä paitsi paikallisella, mutta myös kansallisella sekä jopa globaalilla tasolla.

Johtuen metsävarojen tärkeästä yhteiskunnallisesta merkityksestä, ei ole yllättävää, että on olemassa runsaasti erilaisia säädöksiä ja lakeja, jotka vaikuttavat yksityismetsien käyttöön ja käyttömahdollisuuksiin. Lisäksi Suomessa esimerkiksi jokamiehenoikeudet ns. ”maan tapana” mahdollistavat metsien virkistyskäytön kaikille. Metsävarat nähdäänkin osittain yhteisenä resurssina, kansallisena hyvinvoinnin lähteenämme. Tästä johtuen, yhä enenevässä määrin myös muut kuin metsien lailliset omistajat vaikuttavat, ja kokevat että heillä on oikeus vaikuttaa, metsäresurssin käyttöön sen eri muodoissaan, sekä asettavat erilaisia, joskus jopa ristiriitaisia, vaatimuksia sen käytölle. Tästä johtuen metsänomistamista ei voidakaan suoraan verrata esimerkiksi auton tai osakkeiden omistamiseen.

Parhaassa tapauksessa kuitenkin sekä metsänomistajan omat, että yhteiskunnan tavoitteet metsäresurssin käytölle pystytään yhdistämään samanaikaisesti. Tämä kuitenkin edellyttää metsänomistajien omien tavoitteiden syvällistä tuntemista. On keskeistä ymmärtää, mitä *metsänomistajuus* merkitsee, jotta erilaisten tavoitteiden yhdistäminen onnistuisi sosiaalisesti kestävällä tavalla. Tutkimus on perinteisesti lähestynyt metsänomistajien tavoitteita ja heidän metsien käyttöään luomalla erilaisia kvantitatiivisia typologioita metsänomistajista ja pyrkimällä linkittämään tavoitteet metsänomistajien taustamuuttujiin, kuten ikään, sukupuoleen tai asuinpaikkaan. Typologiat tuovat arvokasta tietoa, siitä keitä metsänomistajat ovat ja minkälaisia käyttötavoitteita heillä on metsilleen. On kuitenkin myös todettu, että taustamuuttujat eivät enää ennusta metsänomistajien käyttäytymistä kovinkaan hyvin. Samoin typologioiden on todettu monesti tuovan esille vain ilmeisimmät metsien käyttötavoitteet, jonka vuoksi ne eivät heijastu läheskään aina käytännössä metsänomistajien käyttäytymiseen. Onkin tarve löytää myös uusia lähestymistapoja tarkastella metsänomistajuutta ja metsänomistuksen tavoitteita.

Tämä tutkimus pyrkii osaltaan kontribuoimaan metsänomistajatutkimukseen tuomalla uuden käsitteen, *psykologisen omistajuuden*, metsänomistajuuden tarkasteluun. Psykologisen omistajuuden teoria on alun perin lähtöisin organisaatiotutkimuksesta. Sen lähtökohtana on ajatus siitä, että omistajuus on laillista omistajuutta laajempi ilmiö. Objektiivisen eli laillisen omistajuuden lisäksi omistamiseen liittyy myös psykologinen puoli. Tunne siitä, että omistamisen kohde ”*kuuluu minulle*” tai ”*on minun*”. Psykologisen omistajuuden teorian mukaan on olemassa neljä motiivia eli syytä siihen, miksi henkilö tuntee tarvetta kokea psykologista omistajuutta: vaikuttavuuden ja tehokkuuden tarve (effectance/efficacy), minä-kuvan ja oman identiteetin rakentaminen (self-identity), oman paikan löytämisen tarve (”having a place”) sekä tarve virikkeille (stimulation). Nämä motiivit ovat osittain synnynnäisiä, mutta sosiaalinen ympäristö ja kulttuuri vaikuttavat niihin ja niiden ilmenemiseen.

Lisäksi teoria on tunnistanut kolme reittiä, joita kautta henkilö pääsee kehittämään tai tuntemaan psykologista omistajuutta. Ensimmäinen reiteistä on omistuksen kohteen kontrollointimahdollisuus. Mitä enemmän henkilöllä on mahdollisuuksia kontrolloida psykologisen omistajuuden kohdetta, sen vahvemmin se usein koetaan omaksi. Toinen reitti on kohteen syvällinen tunteminen. Tieto kohteesta, jota kohtaan tunnetaan psykologista omistajuutta, vahvistaa omistajuuden tunnetta. Kolmanneksi reitiksi on nimetty itsensä investointi omistamisen kohteeseen. Tällä tarkoitetaan sitä aikaa, rahaa tai muita resursseja, joita henkilö on investoinut omistamaansa kohteeseen. Esimerkiksi mikäli metsänomistaja tekee itse metsänhoitotöitä metsissään tai käyttää niitä virkistykseen, sitä vahvempaa on monesti omistajuuden tunne omia metsiä kohtaan. Sekä psykologisen omistajuuden motiivit että reitit ovat usein tiiviisti linkittyneitä toisiinsa. Henkilö voi myös kokea psykologista

omistajuutta kohteisiin, joita hän ei laillisesti omista. Esimerkiksi kaksi jokamiehenoikeudella metsiä käyttävää henkilöä voi ajautua sanaharkkaan siitä, kummalla on ensisijainen oikeus vaikkapa marjastaa kyseisellä alueella, ilman että kumpikaan heistä laillisesti omistaa aluetta.

Tässä tutkimuksessa psykologisen omistajuuden teoriaa käytetään käsitteellistämään metsänomistajien sekä muiden yksityismetsien käyttäjien (tässä tutkimuksessa luontomatkailuyrittäjien) metsäresurssia kohtaan tuntemaa omistajuutta sekä ymmärtämään heidän käyttäytymistään. Tutkimusongelmaa lähestytään laadullisella tutkimusotteella. Aineisto koostuu sekä yksityisten metsänomistajien että luontomatkailuyrittäjien teemahaastatteluista. Tulokset vetävät yhteen kolmeen julkaistun tutkimusartikkelin löydökset.

Tulosten mukaan sekä yksityiset metsänomistajat että yksityismaita hyödyntävät luontoyrittäjät kokevat psykologista omistajuutta näitä alueita kohtaan. Omistajuuden tunteen kokeminen ei kuitenkaan liity automaattisesti lailliseen omistajuuteen tai yhteistyösopimuksiin. Esimerkiksi osa luontomatkailuyrittäjistä koki käyttämänsä metsäalueet osittain omakseen ja näkivät omaavansa moraalisen oikeuden niiden käyttöön, vaikkakin tiedostivat samanaikaisesti, ettei heillä ole varsinaista laillista oikeutta alueisiin. Vastaavasti osa metsänomistajista ei vaikuttanut tuntevan kovinkaan paljon psykologista omistajuutta metsiään kohtaan. Nämä metsänomistajat olivat usein ns. passiivisia omistajia, joille metsällä ei ollut suurta merkitystä. Tulokset myös paljastavat, että psykologinen omistajuus ilmenee hieman eri tavoin riippuen siitä, mitkä motiivit ensisijaisesti vaikuttavat sen kokemiseen. Tällä puolestaan oli vaikutusta käyttäytymiseen, kuten esimerkiksi yksityisten metsänomistajien metsänhoitopäätöksiin.

Psykologinen omistajuus voi myös tuoda uusia näkökulmia tarkasteltaessa metsien monikäyttöä ja eri sidosryhmien näkemyksiä siihen, erityisesti pohdittaessa uusia potentiaalisia metsänkäyttömuotoja kuten luontoyrittäjyyttä. Tulosten mukaan ymmärtämällä psykologisen omistajuuden roolia erilaisissa yhteistyösuhteissa ja sidosryhmätyössä, voi olla mahdollista vähentää potentiaalisten konfliktien syntymistä sekä mahdollisesti ymmärtää paremmin niiden perimmäisiä syitä. Lisäksi vaikuttamalla reitteihin, jotka johtavat omistajuuden tunteen kokemiseen, voidaan myös mahdollisesti vaikuttaa toimijoiden psykologiseen omistajuuteen ja sitä kautta heidän käyttäytymiseensä. Kuitenkin ennen kuin psykologisen omistajuuden ymmärtämistä voidaan todella hyödyntää työkaluna esimerkiksi luonnonvarakonfliktien hallinnassa tai metsänomistajien aktivoimisessa, lisätutkimus psykologisen omistajuuden ja käyttäytymisen välisestä yhteydestä, erityisesti luonnonvarakontekstissa, on tarpeen.

Asiasanat: yksityismetsät, metsänomistajuus, psykologinen omistajuus, luontomatkailu, luontoyrittäjyys, konflikti, sidosryhmien hallinta

1. INTRODUCTION

Forest resources provide many benefits, not only to their owners, but also to the wider society. In addition to contributing to the national or regional economy, such benefits include maintaining biodiversity, supporting water resources and preventing erosion and landslides. Forests also play an important role in global CO^2 mitigation (Routa et.al., 2012). Furthermore, forests have so-called social values, which refer to values relating to human experiences of forests (Bjärstig & Kvastegård, 2016), such as recreational and leisure values, scenery benefits, health and wellbeing or identity and heritage values (e.g. Church & Ravenscroft 2008; Hendee & Flint, 2014; Horne et al., 2005; Ingermarsson et al., 2006; Park et. al., 2010).

However, a large portion of the forests generating the above-mentioned benefits in Europe and the US are privately owned. According to the State of Europe's Forests report (2015), approximately 60% of the forests in the EU-28 area are privately owned, while in the US, the figure is 58% (Butler et al., 2016; Oswalt et al., 2012). Furthermore, the majority of privately-owned forests are owned by so-called non-industrial private forest owners (NIPF), i.e. private forest owners who are individuals or corporations other than the forest industry, and the management may include objectives other than timber production (Dictionary of Forestry, 2016). Typically, the term NIPF owners refers to individual persons or family forest owners (Harrison et al., 2002). For example, in the US, 95% of all private ownership is classified as family or individual ownership (US Dept. of Agriculture, 2013). In Europe, private, non-industrial ownership is dominant, for example, in countries such as Austria, Finland, France and Slovenia (Schmithüsen & Hirch, 2010). Thus, the decisions NIPF owners make regarding their forest resources have a direct impact on the availability of the benefits forest resources provide to society.

It is therefore unsurprising that a vast number of regulations and land use practices exist that set the regulatory framework for the use of forests by their owners (e.g. Hiedanpää, 2002; Mattila et al., 2013; Saaristo & Vanhatalo, 2015; Tuunanen et al., 2012). Moreover, in addition to actual legislation, different policy incentives (taxes, voluntary schemes, management programmes etc.) are introduced to encourage forest owners to use their forests in certain ways (e.g. Act of Jointly-owned Forests, 2003; Mayer & Tikka, 2006). These can be seen, in principle, as attempts to safeguard the demands of the public and society regarding private forest resources. Due to these demands and expectations, forest owners do not have sole control over their forest areas. Thus, ownership of forests cannot be directly compared to ownership of cars or stocks, for example. For instance, in Finland national policies have promoted commercial timber production in private forests to support the forest industry for decades, which in turn has accounted for a significant part of the national economy. In addition, the regulatory framework provides recreational opportunities for all in private forests through the right of public access (Everyman's Rights). Similarly, EU legislation contains certain climate and conservation goals to which Finland as a nation and the EU as an institution have committed. Many of these originate from private forests.

Due to the important role NIPF owners play in the sustainable use of forest resources, an extensive amount of research has also focused on identifying NIPF owners and their objectives for their forests (e.g. Boon et al., 2004; Hogl et al., 2005; Ingemarson et al., 2006; Karppinen, 1998; Karppinen & Tiainen, 2010), how they intend to use their forests (e.g. Favada et al., 2009; Gruchy et al., 2012; Rämö et al., 2009; Silver at al., 2015), and their attitudes towards issues such as forest management strategies, environmental protection, forest owners associations or new forest-owning forms (e.g. Bieling, 2004; Glück et al 2010; Lidestav & Arvidsson, 2012; Lähdesmäki et. al., 2016; Mäntymaa et al., 2009; Põllumäe et. al., 2014). Several studies have also analysed the effectiveness of different policy measures or mechanisms, such as financial incentives, in the context of private forestry (e.g. Church & Ravenscroft, 2008; Cubbage et al., 2007; Kilgore, 2007; Serbruyns & Luyssaert, 2006).

In these studies, a clear change among NIPF owners has been identified. Forest owners are becoming a more heterogeneous group, and accordingly, their objectives and values towards the forests are increasingly diverse (Hänninen et al., 2011;

Karppinen, 1998). Some of the main drivers behind this development are socio-demographic changes in the rural population, owners' economic independence from their forests, and urbanization as a wider phenomenon (Živojinović et al., 2015). In Finland, these changes have been on-going on a larger scale since the 1960s. As early as 1975, Reunala reported changes among Finnish forest owners and a "*concerning declining trend in the number of farmer-forest owners and an increasing number of forest owners with no agricultural connection*" (Reunala, 1975, free translation).

These changes among forest owners and their objectives have been seen as entailing certain threats. Several scholars have identified so-called increased passivity among forest owners (Kline et al., 2000; Ni´ Dubhain et al., 2007), and forest owner types categorized as passive or indifferent have been empirically found in several forest owner studies around Europe and the US (e.g. Bieling, 2004; Ingemarson et al., 2006; Kline et al., 2000; Ulizcka et al., 2004). Passive forest owners have been defined as owners who "*do not appear to own forest land for any specific stated purpose.*" (Kline et al., 2000, p. 306) or as a "*type of owner for whom no objectives are really important, except simply to own the forest and keep it in the family*" (Boon et al., 2004, p. 47). From society's perspective, this can be seen as a potential waste of forest resources, as such forest owners typically respond poorly to policy incentives and place less importance on any kinds of benefits drawn from forests (Boon et al., 2004; Follo, 2011). Nevertheless, the passivity of forest owners in previous studies has often been understood quite narrowly, referring only to owners' passivity in forest management and wood production (e.g. Mattila et al., 2013). Thus, owners' indifference towards their forests has also been interpreted as a sign of some degree of alienation from the industrially-driven culture of forest management (Häyrinen et al., 2015). In fact, it has been suggested that owners who are passive in relation to timber markets or wood production may still be very dedicated forest owners (Butler et al., 2016; Hujala et al., 2013; Häyrinen et al., 2015; Matilainen & Lähdesmäki, 2014). This might indicate that these so-called passive forest owners could potentially be more interested in using their forest resources in some other way which better matches their own values and objectives. This provides new opportunities for considering the sustainable use of forests from a wider perspective and opens the door for new innovative, also economic, forest use.

Forests indeed also provide an important resource for diversifying local-level rural economies in sectors other than the forest sector (Pilz & Molina, 1996; Saarinen, 2003; Živojinović, et al., 2017). For example, consumers' growing interest in healthy living and increasing respect for pure and authentic nature (CREST, 2016; Dodds et al., 2010; Fredman & Tyrväinen, 2010) provide new business opportunities for nature-based entrepreneurship (NBE). Nature-based entrepreneurship is defined as environmentally responsible entrepreneurship based on resources and experiences offered by nature (Rutanen & Luostarinen, 2000). In nature-based entrepreneurship, nature is a significant factor of production, either through material or immaterial values, and it must be taken into consideration in a sustainable way. Good examples of nature-based entrepreneurship are utilizations of nature-based tourism and non-wood forest products like berries, mushrooms, herbs or decorative arts and crafts. As two-thirds of Finland is covered by forest, forests are also one of the main environments for nature-based entrepreneurship. However, the forests used in these activities are not typically owned by the nature-based entrepreneurs[1] themselves. Instead, especially in Southern and Western Finland, they often rely on privately-owned land and are partly implemented within the Everyman's Rights, in which case no permit from the landowner is required.

As society's needs and demands for the use of forest resources seem to be continuously increasing (e.g. Lindahl et al., 2017; Wilkes-Alleman et al., 2015), to be successful, the multiple use of forest resources, policy incentives and practical solutions need to match both the objectives of the forest owners and the public need for forest resources in a sustainable way. As forest-based resources provide benefits at several levels (local, national, global), increasingly people other than forest owners feel that they have the "right to enjoy" and, therefore, also the "right to a say" on the use of natural resources based on their own values (Jacoby, 2001). In other words, several interest or stakeholder groups have developed feelings of possession towards privately-owned forest resources. In the

1 In this study, the terms small business owner-manager and entrepreneur have been used synonymously, although there is a conceptual difference between these two terms, see for example, the study of Carland, et al. (2002). The main reason for this is the fact that in the Finnish language, the term "entrepreneur" (yrittäjä) is not exclusively reserved for those business persons with certain entrepreneurial characteristics or who are aiming for growth or innovativeness. Accordingly, in Finnish the term "entrepreneur" usually includes, although is not restricted to, small business owner-managers.

worst case, disagreements between objectives can escalate into a natural resource conflict (Bennett et al., 2001). Although natural resource conflicts are often non-violent, they are still destructive, as they impede development of cooperative relationships – sometimes even conservation efforts (von Essen et al., 2015; Woodroffe et al., 2005) – and hinder the multiple use of forest resources in a socially sustainable way (Shanley et al., 2012; Wilkes-Allemann et al., 2015). From society's perspective, they can thus hinder the effective and sustainable use of forest resources.

Conversely, in the best case, the various objectives of both private forest owners and society for the use of forest resources can be simultaneously met. For example, the increasing variation in the preferred use of forests by their owners could be combined with different ecosystem services that rely on forest resources (Westin et al., 2017). Managing different expectations for the resource in a socially sustainable way nevertheless necessitates a profound understanding of forest owners' own objectives, values and motivations regarding their forests. However, previous research shows that forest owners' socio-demographic characteristics or objectives for the use of their forests no longer adequately explain their values and behaviour (e.g. Bourke & Luloff, 1994; Church & Ravenscroft 2008; Ficko et al., 2017; Hujala et al., 2009). As one example, Silver et al.'s (2015) extensive literature review of research focusing on private forest owners' timber harvesting behaviour can be mentioned. They found that some background characteristics have been reported to have, in fact, both positive and negative influences on harvesting/harvesting intentions. Furthermore, for example Bjärsting and Kvastegård (2016) have found no major differences between resident and non-resident forest owners' views on the social value of forests. On the other hand, several studies have found that such factors as age, gender and ownership objectives can be linked to harvesting activity or environmental attitudes (e.g. Kumer, 2017; Kuuluvainen et al., 2014; Uliczka et al., 2004). In addition, it has been suggested that forest owner typologies based on ownership objectives identified in the surveys, capture only the most salient objectives and therefore do not properly reflect forest owners' behaviour (Ficko et al., 2017). Thus, it can be summarised that based on the previous studies, the connection between the background characteristics or forest owners' objectives and forest management can fluctuate and also other approaches are needed to understand the forest owners behaviour better (Ficko et al., 2017).

In addition, policy initiatives created to influence private forest owners' activities often rely on the idea that private forest owners take an economically logical approach to decision making. However, previous research has shown that the assumption that a forest owner aims to maximize their utility in forest decisions is not valid; in reality, decision making is influenced by a range of emotional and social factors (Burton, 2004; Hujala et al., 2007; Markowski-Lindsay et al., 2016). Thus, it may be difficult for traditional forest-owner typologies or decision-making models based on "comprehensive rationality" to capture this variety (Ananda & Herath, 2009; Mendoza & Martins, 2006; Rosenhead, 1989). To respond to this problem, forest-owner research has increasingly adopted more sociological and psychological elements and theories in order widen the approach to forest owners' behaviour. For example, several scholars have used the widely recognized theory of planned behaviour (TPB) (Fishbein & Ajzen, 2011) to analyse forest owners' intentions to perform a certain activity (e.g. Brough et al.,2013; Becker et al., 2013; Karppinen & Berghäll, 2015; Primmer & Karppinen, 2010; Thompson & Hansen, 2013). In addition, other socio-psychological theories have also been used (e.g. Bjärsting & Kvastegård, 2016; Hokajärvi et al., 2009; Van Herzele & Aarts, 2013). Even though not every study has provided positive evidence of the usefulness of sociological and behavioural theories for forecasting the behaviour of forest owners or forest-related stakeholders (Hoogstra-Klein et al., 2012), these approaches have nevertheless provided new information on the "underlying motivations and values" of private forest owners, called by several scholars for better to understand private forest owners' behaviour (Ficko et al., 2017; Ingemarsson et al., 2006; Häyrinen et al., 2016; Karppinen, 1998). Psychological and sociological approaches to forest-owner research have placed greater emphasis on self-identity, place attachment, links to heritage, a sense of land custodianship, a sense of ownership and perceived property rights as the objectives of forest or woodland ownership (Church & Ravenscroft, 2008; Ross-Davis et al., 2005). Thus, there is an indication that a better understanding of the essence of forest ownership as a mental state could provide new information on the behaviour of private forest owners' in different situations. For this, new conceptual tools are also needed.

This study aims to contribute to the abovementioned research by focusing on analysing the feelings of ownership that both private forest owners themselves and other groups of forests users have developed towards privately-owned forest re-

sources. Moreover, a further aim is to identify how these feelings of ownership impact the multiple use of forests. To achieve these aims, a novel concept in the forest-research context, psychological ownership, is introduced as a potential approach for understanding the values forest owners attribute to their forests as well as to explain, on its part, their behaviour. Psychological ownership is based on the idea that ownership should not be understood solely as a legal construct; rather, ownership should be considered to be a "dual creation, part attitude, part object, part in the mind, part 'real'" (Etzioni, 1991). "Real", objective ownership is related to economic or legal reality, while ownership "in the mind", i.e. psychological ownership, is related foremost to possessiveness, to the feeling "it is mine" (Pierce & Rogers, 2004; Pierce et al., 2001).

The concept of psychological ownership originates from organizational research and most experimental studies have been conducted in this context (e.g. Brown et al., 2014b; Mattila & Ikävalko, 2003; Pierce et al., 2001; Pierce et al., 2003; Pierce & Jussila, 2011). However, the subject of this research has nevertheless been human behaviour. Thus, since the introduction of the concept, ideas of psychological ownership have been successfully applied to other fields of research, such as consumer behaviour and hospitality (e.g. Asatryan & Oh, 2008), entrepreneurship (e.g. Townsend et al., 2009) and health studies (e.g. Karnilowicz, 2011). Therefore, there is no reason to assume that the same phenomenon or logic would not also apply in the context of human-natural resources interaction. In fact, psychological ownership has recently been used to study wildlife conservation (Pohja-Mykrä, 2014). As there is previous evidence of the possessive feelings that individuals other than the legal owners have towards natural resources (e.g. Peltola et al., 2014), psychological ownership also offers a new approach for studying cooperative relationships related to the use of forests by multiple stakeholders, and thereby helping to maintain the social sustainability of forest activities.

2. THEORETICAL APPROACH

2.1. FROM SOCIAL SUSTAINABILITY TO PSYCHOLOGICAL OWNERSHIP

As the aim of this study is to contribute to the socially sustainable use of forest resources, the theoretical approach is based on two concepts: the stakeholder approach and psychological ownership in the context of social sustainability. Currently, social sustainability is generally seen as one dimension of sustainable development (McKenzie, 2004; Rouhinen, 1991), even though the discussion on sustainable development initially emphasized mainly ecological sustainability (Colantonio, 2009; Littig & Griessler, 2005; Vallance et al., 2011). In many cases it has, in fact, been evident that in order to achieve or maintain ecological sustainability, issues of social sustainability must first be solved (see e.g. Colding & Folke, 2001; Pohja-Mykrä, 2014). Social sustainability has been found to be essential in order to maintain economic sustainability as well. For example, in a rural setting, social sustainability has a direct link to the survival of companies (Lähdesmäki & Suutari, 2012), and managing it can be one of the key competencies of rural entrepreneurs (Matilainen & Keskinarkaus, 2010). Thus, managing people plays a critical role in achieving sustainable use of natural resources or sustainable development in a wider sense.

As a concept, social sustainability is nevertheless very policy orientated and ambiguous. For example, the term has been used regularly in policy documents (e.g. the European Union Strategy for Sustainable development, 2001; EU Forest Strategy, 2013), even though it seems to lack an explicit, generally accepted definition. Instead, several scholars have suggested diverse ways to organize the concept and its dimensions. In their extensive literature review Vallance et. al., (2011) divided the understanding of the social sustainability concept into three wider categories. In the first one, social sustainability is seen as developing equal opportunities, such as provision of basic infrastructure and services, and freedom or access to influential decision making (development social sustainability). In the second category, some researchers have understood the concept as the human potential to generate improved environmental outcomes i.e. building better connections between people and the biophysical environment (bridge social sustainability). Thirdly, some associate social sustainability as maintaining traditions, practices or places people want to see sustained, such as access to traditional fishing grounds (maintenance social sustainability) (Vallance et al., 2011). These different approaches further confuse building a mutual understanding of what is meant by social sustainability. In addition, debate has centred on the main social objectives that should be considered in sustainable development and thus in social sustainability (Littig & Griessler, 2005; Omann & Spangenberg, 2002). The concept is also under-theorized and thus often oversimplified as a theoretical construct (Colantonio, 2009; Littig & Griessler, 2005).

In the natural resource context, social sustainability has been defined as development which reinforces individuals' control of their own lives and in which the results of development are distributed equitably (Iisakkala, 1993; Rouhinen, 1991). In the context of sustainable forest management, the social element of sustainability has been described as a "*contribution to the fulfilment of human needs in a broader scope*" (Lähtinen et al., 2014, p.1204) or as "*a social, multi-valued process in which ecological sustainability is considered in society in such a way that the welfare of humans remain at the highest possible level*" (Juurola & Karppinen, 2003, free translation, p.134). In sustainable forest management certification (e.g. PEFC, FSC), social sustainability has been included in the certification criteria as "*maintenance of other socio-economic functions and conditions of forests*" and introduced at a practical level as guidance for respecting traditional rights related to the local people, engaging them in the decision making processes and enhancing their employment related to forest resources (PEFC, 2010, p. 12). However, to determine the essence of the concept or operationalize it, a more accurate approach is needed. Some studies in the organizational research literature state that transferring social sustainability to business objectives is best undertaken by using the stakeholder approach (Clarkson, 1995; Epstein & Buhovac,

2014; Mendoza & Prabhu, 2006). In the natural resource context, this relates to both to the situations in which the social sustainability of local-level activities of individual nature-based companies and the multiple use of natural resources in a wider sense are discussed. In this study the stakeholder approach has been used to understand cooperation between nature tourism entrepreneurs and private forest owners.

The origins of the stakeholder approach lie in organizational research. A stakeholder is any group or individual who can affect or is affected by the achievement of an organization's aims (Freeman, 1984). The impact and influence mechanism vary according to the type of stakeholder group. Stakeholders can be divided into "primary stakeholders", who have a formal, official or contractual relationship with the organization, and secondary stakeholders, who represent the remaining interest groups in the operational environment, such as local people and forest owners (Carroll, 1989; Clarkson, 1995; Näsi, 1995). Therefore, stakeholders can relate directly to a company's product or service provision, but they can also be groups which are less directly connected to the business itself but are influenced by its activities, for example when a company's activities set limitations on land use by local people.

Stakeholder groups are specific to each case and often form extremely complex networks (Neville & Menguc, 2006). In many cases, it is impossible to satisfy fully all the stakeholder groups. Therefore, it is important to find the key stakeholders for each case (Bryson, 2004). Several types of stakeholder analysis and mapping practice have been developed to locate the most critical stakeholders for different processes and activities (e.g. Bryson, 2004; Bourne & Walker, 2005; Cleland, 1999; Mitchell et al., 1997; Neville & Menguc, 2006). According to one widely applied stakeholder classification (Mitchell et al., 1997), the critical attributes of key stakeholders are their power, legitimacy concerning the stake, and urgency of the claim. Stakeholders are considered to have power to the extent that they have access to or can gain access to coercive (based on physical resources), utilitarian (based on material or financial resources), or normative (based on symbolic resources) means to impose their will concerning the stake (Mitchell et al. 1997). Legitimacy, on the other hand, has been defined as the generalized perception that the claims of the stakeholder group are desirable or appropriate within some socially constructed system of norms, values, beliefs, and definitions (Suchman, 1995). Finally, stakeholder urgency can be defined as the stakeholder's claim for immediate attention. It is based on the idea of time sensitivity and criticality (Mitchell et al., 1997). The most important key stakeholders typically have all these attributes.

Bryson (2004) emphasises the importance of finding ways to satisfy key stakeholders, at least minimally, according to their own criteria for satisfaction. This highlights the need to understand the stakeholder's perspective. Sometimes a stakeholder's primary agenda is difficult to identify, and this challenge has led to countless project and business failures (Bourne & Walker, 2005; Nutt, 2002). This highlights the critical role of effective and successful cooperation and stakeholder management strategies, especially as stakeholder groups in rural areas typically tend to place more expectations on companies than stakeholder groups in urban areas (Lähdesmäki, 2005). A stakeholder management strategy can be defined as a set of methods, either strategically considered or unconscious, used by an organization to act sustainably with a range of stakeholder groups. Typically, stakeholders are provided value and decision-making influence related to the organization's activities (Freeman et al., 2007). According to Harrison et al., (2010) organizations act in this way because "*they believe (1) it is the right way to treat stakeholders (normative view), (2) it is economically advantageous (instrumental view), or (3) both of these*" (Harrison et al., 2010, p. 61).

In the planning and use of natural resources on a wider scale, stakeholder management is often described as participatory planning processes or multi-criteria decision making, in which stakeholder groups should have a meaningful chance to participate in planning and decision making related to the use of natural resources. A body of literature on participatory management highlights the critical role of stakeholders in utilizing natural resources (e.g. Bisi & Kurki, 2008; Driscoll & Starik, 2004; Henriques & Sharma, 2005; Kantola et al., 2018; Pohja-Mykrä, 2014; Reed et al., 2009). There are several approaches to participation, but, according to Rowe and Frewer (2000), participation is conceptualised as two-way communication in which information is exchanged between the parties. In the context of the use of natural resources, participation has typically been seen as pragmatic (instrumental) rather than normative; i.e. the aim of participation is to deliver higher quality decisions (Reed et al., 2009).

The general conclusion from this large body of literature is that, typically, participatory management indeed increases the success of the planning process and the sustainability of the decisions made

(Reed et al., 2009). However, at the same time, the participatory approach has also faced criticism. In addition to the discussion on the power relations and complex social relationships that effect in these processes (Eversole, 2003), researchers have also observed that participatory management can easily fail to take adequate account of the emotional aspects that affect stakeholders' opinions (see e.g. Buijs & Lawrence 2013; Idrissou et al., 2013; Parkins & Mitchell, 2005; Morales & Harris, 2014). In the worst case, this can lead to a conflict between stakeholders (e.g. Filteau, 2012; Hiedanpää, 2005; Pohja-Mykrä, 2016). Thus, identifying and better understanding the underlying causes of stakeholder disagreements is vital (Kovács et. al., 2015).

One significant phenomenon influencing stakeholders' attitudes towards an organization's activities and thus also social sustainability is the ownership experienced of the resource or process in question. According to Grunebaum (1987), ownership refers to the relationship between human beings and the things and objects surrounding them and concerns not only possessiveness, but also the rights and responsibilities towards what is (considered) possessed (Dittmar, 1992; Pierce et al., 2001). Ownership is thus primarily a conceptual matter. As Snare (1972) p. 200 wrote in his study, "*a stolen apple does not look any different from any other apple*". Understanding the ownership better as a complex and multidimensional concept with certain psychological aspects could reveal new insights into both the stakeholder and conflict management situations.

2.2. PSYCHOLOGICAL OWNERSHIP

Psychological ownership can be defined as a state in which individuals perceive the target of ownership, an object, entity or idea, as "theirs" (Furby, 1978; Mattila & Ikävalko, 2003; Pierce et al., 2003). It thus reflects a relationship between an individual and an object in which the object is experienced as having a close connection with the self (Mattila & Ikävalko, 2003). Psychological ownership is foremost a mental state with both affective and cognitive elements (Pierce et al., 2001). It is also associated with certain rights and responsibilities in relation to the target of the ownership, such as the right to receive information about it and the right to have a say over the decisions affecting it (Hall et al., 2005). It must be noted, though, that similar fundamental rights are associated with objective ownership. For example, according to Pierce et al. (1991), there are three fundamental rights that accompany objective ownership: the right to a share of the owned object's physical being and/or financial value; the right to information on the status of that which is owned; and the right to exercise influence (control) over that which is owned. Similarly, the property rights literature highlights elements like control, right to access and withdrawal rights (Nichiforel & Schanz, 2011; Ribot & Peluso, 2003; Schlager & Ostrom, 1992). Thus, the views of legal and psychological ownership sometimes overlap and can reinforce each other.

However, there are significant differences between these two phenomena as well. Objective ownership is recognized foremost by society, and the rights that come with ownership are specified and protected by the legal system, while psychological ownership is recognised foremost by the individual who holds that feeling and manifests the felt rights associated with it. Similarly, the origin of the responsibilities associated with legal and psychological ownership differs. The responsibilities that come with legal ownership are often an outgrowth of the legal system, whereas those associated with the psychological state stem from the individual, i.e., from his or her feelings of being responsible (Pierce et al., 2003). It should also be noted that psychological ownership can exist in the absence of legal ownership. Similarly, people can legally own an object yet never claim possession of it as their own (Pierce et al., 2003). In addition, like legal ownership, psychological ownership can also be exclusive or shared in nature (Pierce & Jussila, 2011).

Even though psychological ownership is always primarily experienced at an individual level, in other words, in someone's mind, there is also evidence of psychological ownership as a group-level phenomenon (Gibson & Earley, 2007; Pierce & Jussila, 2010; Rantanen & Jussila, 2011). In this "collective psychological ownership", a group of people consider the object of ownership as theirs. Collective ownership is seen as an extension of personal feelings of ownership, especially personal feelings of shared ownership. In other words, among group members, a sense of shared ownership is also vital at a personal level (not mine, but ours). The conditions that affect the emergence of individual psychological ownership are also necessary for the emergence of collective psychological ownership (Pierce & Jussila, 2011). However, in addition, a collective understanding of shared actions towards the target of ownership is needed.

There is no common consensus among researchers about the basis of the psychology of mine, i.e. where ownership feelings originate, but

based on previous work (Belk, 1988; Furby, 1991), Pierce et al., (2003) proposed that the emergence of psychological ownership was related to the fulfilment of three motives or human needs, namely "efficacy and effectance", "self-identity" and 'having a place'. Later, a fourth motive, stimulation, was included in the theory to explain the dynamics of psychological ownership (Pierce & Jussila, 2011). Avey et al. (2009) have also proposed "accountability" to be included as one dimension of psychological ownership. This approach has not raised much interest among researchers though, and in general, accountability has been seen more as an antecedent or a consequence of psychological ownership rather than an individual dimension of it (Dawkins et al., 2017). This is also the approach chosen for this study.

All the motives defined by Pierce et al. (2003) are very much interlinked. Some researchers see these motives as innate needs, meaning that they are more "biological instincts" than learned behaviour (e.g. Pyszczynski et al., 2009). For example, the primitive drive to possess has also been detected in animals (Ellis 1985, Jones & Gosling, 2005). In addition, the tendency to act possessively develops at a young age in humans (Fasig, 2000; Isaacs, 1933). However, feelings of ownership can also be seen as socially constructed, as they have a different meaning in Western cultures than in some indigenous cultures (Pierce & Jussila, 2011). Litwinski had already developed in 1942 a socio-biological perspective on ownership feelings according to which possessive behaviour can be seen as an innate tendency, even if it "*doubtless owes much of its strength and direction to social example and education*" (Litwinski, 1942, p 36). Dittmar (1992) also stated in her work that biology may play a role in the development of possessions, but not an overriding one, as social and cultural factors influence how people relate to these possessions (see also Fasig, 2000). This socio-biological approach is the one adopted by Pierce et al. (2003) in developing the concept of psychological ownership and the approach of this study to the dimensions of psychological ownership and the psychology of mine.

The first motive of psychological ownership, **efficacy and effectance**, relates to feelings of control. According to White (1959), people have an innate need to produce desired outcomes in their environment. Following Isaacs (1933), Pierce & Jussila (2011) state that this need for control over the object of possession becomes an issue of power and powerlessness and psychological consequences of these states, like the feeling of safety. Similarly, it has been stated that the feeling of being in control of something and therefore absence of a sense of helplessness are considered to be the basic ingredients of a healthy personality. Also, neural responses to this situation have been found (Decklerck el al., 2006). According to Dittmar (1992), to possess an object is the ultimate form of control. It has also been stated that possessions are important and become a part of the extended self, since they express a person's ability to exercise control over the environment and other people (Dittmar, 1992; Furby, 1978). Thus, the motive of effectance produces both intrinsic and instrumental satisfaction (Pierce & Jussila, 2011). It can also be seen to have a close link to constructing one's self-identity. In the forest context, the feeling of self-efficacy can manifest itself as a desire to decide on forest management alternatives or limit the access of other potential users to the forest and forest resources. Nevertheless, it must be noted that, at a personal level, perceived control is particularly important. Actual control options, such as through property rights, are likely to increase feelings of control, but they are not a prerequisite of such feelings. Thus, psychological ownership can also exist without legal ownership, as mentioned earlier.

In addition to efficacy and effectance, psychological ownership stems from the motive of **self-identity.** Psychological ownership feelings, for their part, help people define who they are, and they play a significant role in the expression of that identity to others (Pierce & Jussila, 2011). In other words, the target of ownership becomes part of the extended self (Belk, 1988). For example, Bliss and Martin (1989) have found that a forest contributes to the identity of the family who owns it. Possessions are thus used to gain self-understanding.

Some scholars have proposed that self-identity is located between the individual and society (Allport, 1955; Ellemers et al., 2002; Terry et al., 1999). Through socialisation processes, individuals learn the meaning and importance of certain possessions and in time, people tend to integrate the socially defined meanings of owning certain objects into their own values via the process of internalization (Deci & Ryan, 2000). As a result, they derive pleasure from being around these socially valued objects (Mead, 1934). In addition, people use ownership to express their self-identity to others. According to Dittmar (1992), possessions play a significant role in social interaction and are symbolic expressions of a person's self-identity. This has been studied widely in the field of consumer research (Smith et al., 2008; Wallendorf et al., 2008). Possessions are also used to maintain the continuity of self-identity and provide feelings that connect oneself to the

life one has already experienced (Pierce & Jussila, 2011).

In their work, Hillenbrand and Money (2015) claimed that it was nevertheless over-simplistic to consider self-identity a single entity. Rather, as one motive for psychological ownership, it should be understood as a multi-layered phenomenon. They point out that in identity research, scholars have described three main classes of self-conception: the actual self, the ideal self and the ought self (Higgins, 1999). The actual self describes who we are at a given time; the ideal self refers to what we would like to be in an ideal world; and the ought self describes individuals' perception of what they think they ought to be in the eyes of others. In addition, self-identity can be seen as "a collection of identities" that reflect the roles a person occupies in different social structures (Terry et al., 1999). Other scholars have also divided identity into personal identity and social identity, which may differ from each other (Ellemers et al., 2002).

Based on the abovementioned research, Hillenbrand and Money further divide in their study self-identity into four different layers: core-self, learned self, lived self and perceived self. Core self is seen as representing the innermost aspects of personal identity, conscious or unconscious. In turn, learned self comprises the norms and values of society and family and provides the basis for individuals' understanding of right and wrong behaviours. Lived self presents a range of activated cognitions and emotions learned from day-to-day life, while perceived self-identity refers to our understanding of how others see us. Hillenbrand and Money highlight that psychological ownership manifests itself differently according to which identity layer it relates to. They also observe that potential incongruence between the layers generates dysfunctional behaviour, and thus people may seek the experience of psychological ownership both to enhance congruence and also in a way to compensate for the incongruence between the "layers of self" (Hillenbrand & Money, 2015, p.153). For example, people might ask themselves, either consciously or unconsciously, whether owning a forest area would help them become who they really are or whether owning a forest area would help them to be seen by others as they should be seen. Hillenbrand and Money also highlight the dynamic nature of identity building and its fluctuation over time. Similarly, the manifestation of psychological ownership towards the object may change over time (Pierce & Jussila, 2011).

The third motive for psychological ownership, **having a place, need for home,** arises from the need to have a certain space in which to dwell (Pierce et al., 2003). For example, recreational forest users can feel "at home" in their favourite, often-visited place. According to Pierce and Jussila (2011), humans need to understand themselves in time and place. Thus, the motive of "having a place" is closely connected to the motive of self-identity. Also, Edney (1976) sees that the need for a certain place (territory) contributes to identity. Moreover, both Porteous (1976) and Ardrey (1966) claim that the need to possess a certain place is an innate need, even though the social environment and norms undoubtedly influence the emergence of territoriality.

In the literature, the motive for "having a place" has also been strongly associated with the concepts of a "sense of belonging" and "being familiar with" (Avey et al., 2009: Pan et al., 2014; Van Dyne & Pierce, 2004). To have roots and to belong to something are seen as an important human need (Maslow, 1954; Weil, 1952). Such needs can be seen to stem from the importance of feeling of safe, both physically and psychologically (Hagerty et al., 1992; Porteous, 1976). In the theory of psychological ownership, the concept of place is not limited to physical place. Rather, it can also be seen as a psychological state (Pierce & Jussila, 2011).

The motive of **stimulation** was added to the theory later on by Pierce and Jussila (2011) as it became evident that the theory also has to capture the people's need for arousal or activation, which could explain some dynamics of the concept of psychological ownership (Pierce & Jussila, 2011). It has been argued by scholars (see e.g. Ryan & Deci, 2000) that humans have an innate need to seek stimulation. This explains why people might leave their comfort zone even when their physical or psychological balance is not disturbed or endangered or when there is no extrinsic motivation to do so. In this approach, humans are seen as proactive organisms that actively promote growth and seek novelty and new opportunities (Deci & Ryan, 2000). From an evolutionary perspective, this need has helped humans to adapt to new circumstances.

Possessions have been connected in previous research to the need for stimulation (Duncan, 1981; Kamptner, 1989). Stimulation can be viewed as being closely linked to the motive of effectance, as the need for stimulation drives humans to explore and interact effectively with their environment and therefore experience competence and effectance (Pierce & Jussila, 2011). In the theory of psychological ownership, the need for stimulation is seen to answer the question of why objects fall into a person's possession in the first place (Pierce

& Jussila, 2011). Thus, it is seen as an explanation for why people seek new possessions. Pierce and Jussila (2011) also suggest that the experience of psychological ownership stimulates the individual both in terms of action and memory.

2.2.1. ROUTES TO PSYCHOLOGICAL OWNERSHIP

Each of the motives described above facilitates the development of psychological ownership, and according to the theory, only one of the motives needs to be aroused for feelings of ownership to develop (Pierce & Jussila, 2011). Nevertheless, the close links between the motives would suggest that more than one motive is typically present at the same time. It must be noted, though, that no direct causal relationship exists between the motives and psychological ownership. The emergence of the feeling of psychological ownership, i.e. how people come to experience psychological ownership, is often a lengthy process which might also be affected by individual differences. According to the theory, even though every person has innate needs linked to the motives of psychological ownership, the cultural and social circumstances are often different. Moreover, there may be individual traits that affect how feelings of psychological ownership emerge. One such trait presented by Pierce and Jussila (2011) is individualism/collectivism. The authors suggest that individualists are more likely to experience exclusive ownership, while more collectively-orientated people are more likely to experience shared ownership. In addition, the role of possessions and their meaning also changes during the lifespan (Kamptner, 1991).

Despite these individual and circumstantial differences, Pierce et al. (2001) nevertheless identified three potentially interrelated routes through which people come to experience psychological ownership, namely controlling the target of ownership, coming intimately to know the target of ownership, and investing self in the target of ownership. First, being in control of an object creates feelings of ownership. In other words, the greater the amount of control a person can exercise over certain objects, the more they will be psychologically experienced as part of the self (Furby 1978, cited in Pierce et al., 2003). Several studies have also provided empirical evidence on the positive relationship between experienced control and psychological ownership (Brown et al., 2014b; Dunford et al 2009; Jussila & Puumalainen, 2005; Pierce et al., 2004). Exercise of control becomes tangible by having access to the use of the object.

Second, the more knowledge and information an individual has about an object, the deeper is the relationship between the self and the object, and hence the stronger is the feeling of ownership towards it. In other words, psychological ownership reflects the psychological proximity between the owner and the object (Beggan & Brown, 1994). In their study on psychological ownership and job complexity, Brown et al., (2014b) empirically observed a positive relationship between psychological ownership and intimately knowing the object of ownership. According to their study, the more complex job was, the more opportunities there were for the employee to get know the job more thoroughly and further, the more familiar the respondents were with the job in question, leading to stronger psychological ownership.

The third route to psychological ownership defined by Pierce et al. (2003) is investment of the self in the target of ownership. Investment of the self allows individuals to see their reflection in the target and to feel their own effort in its existence (Pierce et al., 2003). Thus, the investment of individual energy, time, effort and attention in objects causes the self to become one with the object and develop feelings of psychological ownership towards it (Ikävalko et al. 2006). In addition, empirical studies by Brown et al., (2014b) and Jussila and Puumalainen (2005) have found positive correlations between psychological ownership and investing oneself in the object of ownership and between intimate knowledge of an object and the emergence of psychological ownership.

Each route can enforce any motive of psychological ownership, and they can be complementary and/or additive in nature. Moreover, any single route can still result in feelings of ownership independent of each other. However, feelings of ownership of a particular target have been estimated to be stronger when an individual arrives at this state through multiple routes rather than through a single route (Pierce et al., 2003). For example, the more someone invests personal values, time and energy in a target, the more intimate is their knowledge of it and the more it becomes a representation of the self. This, in turn, results in stronger impetus for control and again in more time invested (Hall et al., 2005). Although there is no clear consensus on whether some routes are more effective in generating psychological ownership than others, Pierce et al. (2003) speculate that the routes of control and investing oneself in the target have the potential to be the most effective. Nevertheless, it should be noted that psychological ownership is also a context-bounded phenomenon. In addition to “the

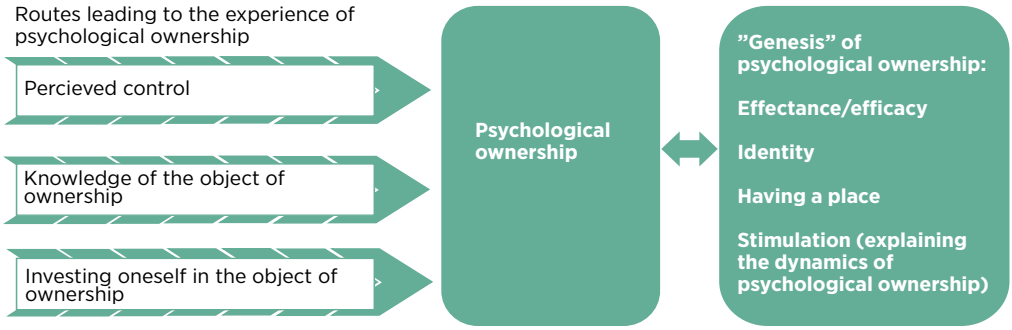

Figure 1. The genesis i.e. motives for a person to experience psychological ownership and the routes leading to the experience of psychological ownership according to the literature.

direct routes" mentioned above, several indirect factors (i.e. influencing psychological ownership through direct routes) have also been identified (Pierce & Jussila, 2011). In addition to individual characteristics, these factors can be structural (e.g. laws and norms) as well as cultural (Mattila & Ikävalko, 2003; Pierce et al., 2003; Pohja-Mykrä, 2014).

2.2.2. ANTECEDENTS AND BEHAVIOURAL EFFECTS

Feelings of ownership are also considered to have important and potentially strong attitudinal, motivational and behavioural effects, for example, on satisfaction (the individual feels comfort and security when in close contact with the object of ownership), commitment, organisational internalization (an organisation's goals and values become personal goals and values) and experienced responsibility. Several scholars have empirically identified a positive relationship between commitment and psychological ownership (Avey et al 2009; Mayhew et al., 2007; O'Driscoll et al., 2006; Van Dyne & Pierce 2004). For example, the more feelings of ownership people experience towards, say, an organization or other target of ownership, the more committed they become to staying close or remaining in connection with the target of ownership feelings, like staying in a job or in the company they have developed psychological ownership of. There is also evidence indicating that psychological ownership increases both loyalty towards an object and willingness to pay more in connection to that object, such as paying to maintain a hiking trail (Lee et al., 2013). Psychological ownership is also positively associated with behaviours that contribute to community well-being, voluntarism, and so-called stewardship behaviour (Hernandez, 2012; Pierce & Jussila, 2011), behaviours which all are interesting in related to the management of natural resources. Pierce and Jussila (2011) further hypothesize that experiences of responsibility and psychological ownership are reciprocally related; i.e. responsibility can be both a consequence and an antecedent of psychological ownership feelings. A lack of psychological ownership, on the other hand, can lead the "owner" becoming alienated or psychologically withdrawing from the target of ownership (Li, 2008; Pierce & Van Dyne, 1993). The findings by Brown et al. (2014b) also show a positive relationship between psychological ownership and owners' internal motivation towards the target of ownership. In other words, the more owners experienced psychological ownership, the more intrinsically motivated they were to focus on the target of ownership. In the forest owner context, all this could mean a closer and more active connection between a private forest owner and their forest holdings.

Nevertheless, psychological ownership also has a "dark side", as it can entail certain more negative attitudinal or behavioural effects. Such behaviour can impede cooperation between people (Pierce et al., 2003) and can lead to conflict situations related to the use of the target. Some of these have been territorial behaviour, escalation of commitment, and counterproductive organizational behaviour (Baer & Brown, 2012; Brown et al., 2005; Pierce & Jussila, 2011). Spector and Fox (2010) defined counterproductive behaviour as behaviour intended to produce negative consequences for an individual or group or the organization itself. However, Pierce and Jussila (2011) hypothesize that the relationship between psychological ownership and counterproductive behaviour can be both positive and negative. If people feel that their psychological ownership is at risk, they may act destructively towards the object of ownership so "at least no

one else can get it". On the other hand, the more the object of ownership is considered to be part of the self (i.e. the stronger the psychological ownership), the more a person is likely to take good care of it, and the less likely that person is to engage in counter-productive behaviour. In addition, if psychological ownership is strong, it can sometimes lead to the escalation of commitment. This means that a person continues to commit to a course of action despite "the warning signs" that commitment is harmful or that a "bad decision" has been made (Staw & Ross, 1987). For example, people may be unwilling to let a certain project go even though there is no realistic hope of its success.

In relation to the multiple use of natural resources, territorial behaviour is probably one of the more relevant behavioural consequences of psychological ownership impeding the joint use of the resources (Brown et al., 2005). Territorial behaviour can cause defensive behaviour and could lead, for example, to the refusal to share knowledge or resources with others or the refusal to co-operate with other actors. This behaviour can also occur in reaction to others' suggestions for change or generate the need to retain exclusive control over the object of ownership (e.g. Baer & Brown, 2012). In their study, Brown et al. (2014a) also provide empirical evidence for the positive relationship between psychological ownership and territory marking (in an office context) and defending behaviour. However, they also note that psychological ownership does not automatically lead to territorial behaviour; in addition, other conditions, like personality traits, must support the development of this behaviour. Sometimes, when people witness radical alteration in targets that they perceive as being theirs, they may also experience personal loss, frustration, and stress (Pierce et al., 2003). One explanation offered for this is that when a person's self-identity experiences too excessive risks caused by strong psychological ownership, self-identity experiences an erosion causing stress, anger and tiredness (Korman, 1991; Pierce & Jussila, 2011). These elements are also often present in conflicts related to the use of natural resources (see e.g. Bisi & Kurki, 2008).

There are also certain antecedents that have been found to impact the development of psychological ownership. These typically affect one or all three routes through which a person develops feelings of psychological ownership. To date, these antecedents have mainly been studied in an organizational context and thus are related to organisation research. For example, job design, organization structure, organizational processes, participative decision making, and leadership have been investigated. Many of these topics are also relevant to the management of natural resources. It is important to keep in mind though that neither the antecedents nor the consequences described above automatically lead to or are the result of psychological ownership. In addition, frame conditions like the characteristics of the object of ownership and the people experiencing ownership also have an influence (Brown et al., 2005; McIntyre et al 2009; Pierce & Jussila, 2011). It has also been suggested that length of tenure plays a significant role in the development of psychological ownership (Raffelsberger & Hällbom, 2009).

2.2.3. PROXIMATE CONCEPTS

As the concept and theory of psychological ownership were originally developed for organizational research, some comparison with the proximate concepts already used in natural resource research is in order. These concepts vary according to their disciplinary roots and therefore they also highlight different aspects of an individual's relationships with the resource (e.g. Brehm et al., 2013, Smith et al., 2011, Trentelman, 2009). Nevertheless, in the natural resource research literature, several commonly used concepts exist with similar elements to the concept of psychological ownership. In these, the object of the emotion is typically seen as a natural site or its interpretation. In the following, the differences between the concept of psychological ownership and some of the common proximate concepts found in natural resource research are presented.

Place meaning, Sense of Place (SOP) and Place Attachment

The emotions and meanings related to natural or wilderness places have largely been studied by using the concept of "**place meanings**" (e.g. Cheng at al., 2003; Kyle et al., 2004 ; Smith et al., 2011,) , "**sense of place (SOP)"** (Brandenburg & Carroll, 1995; Jorgensen & Stedman, 2001; Semken & Freeman, 2008), and, perhaps more commonly, "**place attachment**" (e.g. Brehm et. al., 2013; Stedman, 2002; Williams et. al., 1992; Williams & Vaske, 2003). They are typically used to illustrate the relationship between people and spatial settings at an individual or group level (Brandenburg & Carroll, 1995; Jorgensen & Stedman, 2001; Shamai, 1991; Semken & Freeman, 2008). However, neither place meaning and place attachment, nor sense of place are intrinsic to the physical setting itself; rather they reside in human interpretations, constructed through experiences (Davenport & Andersson

2005; Stedman, 2002). Spaces become "places" as they are imbued with meanings through lived experience (Steele, 1981; Tuan, 1989; Williams & Patterson, 1996).

Place attachment has generally been seen to include two dimensions: place dependence and place identity (e.g. Brehm et al., 2013, Stedman, 2002; Williams & Vaske, 2003, Williams et al., 1992). Thus, it has certain central similarities with the concept of psychological ownership, especially related to the dimension of identity. Scholars have suggested that both place identity and the identity dimension of psychological ownership form a component in the construction of a person's self-identity (Dittmar, 1992; Korpela, 1989, Pierce et al., 2001; Proshansky et. al., 1983). In previous studies in the context of natural resources, the concept of place attachment has been used to understand, for example, people's reactions to natural resource management in cases of public recreation areas or tourism destinations and link it to the landscape values (Brown & Raymond, 2007). In addition, the concept of place attachment has been used in second-home-owner studies, in which the focus, however, has been more on its impact on the larger landscape, environment or community than on the relationship between an individual and the target of ownership, such as the house or cottage (e.g. Brown et al., 2003; Stedman, 2006). It has also been used in forest owner studies. For example, Markowski-Lindsay et al., (2016) used the place attachment discussion to understand the values family forest owners hold for the forest beyond the market value of the property.

Sense of place (SOP) is a concept which is quite close to place attachment. In fact, is has been said that sense of place is a geographers' equivalent to an environmental psychologists' place attachment (Williams & Vaske, 2003). Jorgensen and Stedman (2001) argue that the idea of SOP comprises identity (beliefs about the relationship between self and place), attachment (emotional connection to a place) and dependence (degree to which a place, in relation to alternative places, is perceived to underpin behaviour). In some cases, SOP is also regarded as including sense of community (e.g. Pretty et al., 2003). The concept has been used in the literature in contexts like property owners (Jorgensen & Stedman, 2001), residents (Hay, 1998; Kaltenborn, 1998; Pretty et al., 2003), local community members (Davenport & Anderson, 2005), and tourism (Kianicka et al., 2006). In forest owner studies, sense of place has been used as one attribute or ownership value the forest owners link to their forest (see e.g. Creighton et al., 2002) and to understand the changes in forest owners' emotions towards their forests based on the owners' residence (Bergstén & Keskitalo, 2018). In the SOP literature, it has been argued that the meanings individuals and collectives ascribe to a place reflect their cultural and individual identities in a similar way to the feelings of psychological ownership towards a certain target. In psychological ownership, the idea of a "sense of place" can also be seen as being closely linked to one of the motives, "having a place" or the feeling of home.

Nevertheless, the dimension of experienced control and the opportunity to control the object in question are not explicitly discussed in any of these concepts. On the contrary, the control element plays a central role in the concept of psychological ownership. In the context of privately-owned forests, this element becomes even more relevant. Furthermore, rather than focusing on the natural resource as such, both place attachment and sense of place are always dependent on a certain physical place. Therefore, these concepts are of little use when the subject under investigation is not exclusively connected to a specific location, for example, in the case of wild animals. In summary, the concepts of place attachment, place meaning and sense of place generally focus on understanding the wider range of emotions that connect a person to a certain place rather than concentrating specifically on possessiveness.

Sense of belonging

Belongingness is defined by Anant (1966, p. 21) as a "*sense of personal involvement in a social system so that persons feel themselves to be an indispensable and integral part of the system*". In the other words, it can be seen as a fundamental need that exceeds mere physical concerns and satisfies the pressing psychological need to belong (Avey et al., 2009). It is also closely linked to place attachment, and they are seen to reinforce each other (Inalhan & Finch, 2004). Ardrey (1966) also argued that people take ownership of possessions, and structure their lives around them, in an effort to satisfy their need for belonging. A sense of belonging can also be seen as building a person's self-identity. The sense of belonging discussion has also found its way into forest ownership studies. For example, Kendra & Hull (2005) used it as one element among the others to build their study focusing on the forest owners' ownership motivations.

A **sense of belonging** does display certain similarities to the concept of psychological ownership. It has close links to the motive of "having a place or home" and has even been used in the pre-

vious literature as almost a synonym for or parallel concept to this motive (Avey et al., 2009). As such, it can be seen as one innate motive behind psychological ownership. However, it has also been suggested that the motive of "having a place" is a larger concept, as it refers to a person feeling at home in relation to the object of ownership; thus, the motive of "having a place" also includes other elements, such as feeling safe. Therefore, a sense of belonging seems to be just one element in this motive for psychological ownership. In a research context of natural resources, a sense of belonging does not fully describe possessive feelings towards the object of ownership; it describes the feeling that "I belong here" rather than "this belongs to me".

Psychological distance

Psychological distance is a construct referring to the extent to which an object is mentally removed from the self (McDonald et al., 2015), and it has often been described by using four dimensions: spatial, temporal, social and hypothetical (Trope & Libermann, 2010). According to McDonald et al. (2015) citing Trope and Libermann (2010), when an object is perceived to be psychologically close to oneself, it tends to be perceived in a more concrete way. By contrast, when the object is perceived as psychologically far from the self, that object tends to be construed more abstractly. Psychological distance has been used, for example, in tourism research for studying the differences that individuals perceive between their home country and a foreign country (Abooali & Mohamed, 2011) and explaining the gap between environmentally friendly attitudes and actual pro-environmental behaviour or reactions to climate change (Li et al., 2011; McDonald, 2015). In forest owner studies it has previously been used to explain the private woodland owners' timber harvesting decisions (Huff et al, 2017). In addition, Hoogstra and Schanz (2009) used loosely the time dimension of psychological distance to understand the time span of future orientation in forest management planning.

In relation to psychological ownership, psychological distance does not focus on ownership feelings or possession, even though it describes a person's relationship with an object. Instead, it can be seen more as a frame condition under which psychological ownership can arise. One could speculate that the greater the psychological distance between the owner and the object of ownership, the less likely it is that strong psychological ownership feelings will develop. However, there is no research to validate or disprove this hypothesis.

Human territoriality

Human territoriality can be defined as a set of behaviours and cognitions exhibited by a person or group based on perceived ownership of the physical space (Altman, 1975; Bell et all 1996, p. 304). The concept has been used in the development of the concept of place attachment, and it displays some general similarities. Territoriality has also been linked to identity building (Shils, 1975) and has been found to be a useful concept in conflict research for understanding spatial natural-resource conflicts, such as wars, nationalism and regionalism (e.g. Durrenberger & Pálsson, 1987; Knight, 1982). More recently, the use of this concept has also extended beyond physical spaces (Brown et al., 2005). In previous research related to natural or semi-natural environments, human territoriality has typically been used for understanding human spatial behaviour and the use of public spaces and even for customer satisfaction in tourism (Gold 1982; Kärrholm, 2007).

Human territoriality is similar to psychological ownership, and thus involves a strong idea of possessiveness, of mental ownership. The relationship between the two concepts has been studied in organizational research, and it has been suggested that territorial behaviour can indeed be seen to be a consequence of psychological ownership (Brown et. al., 2005; Pierce & Jussila, 2011). Territorial behaviour can be seen to mediate the ownership feelings to the practical actions (Brown et al., 2005).

NIMBY

Another often-applied concept, also related to territorial behaviour, is that of **NIMBY (not-in-my-backyard**), which has been used both to describe and to explain the occurrence of local opposition, typically related to changes in the local environment. In many cases, NIMBY describes the role of proximity (spatial explanation) in such opposition, hence the name not-in-my-backyard (Devine-Wright, 2009). Thus, people can be generally positive towards some development, such as wind power or nature conservation but do not want wind turbines or restrictions on the use of forest resources in their own neighbourhood. Scholars have nevertheless criticized the concept of NIMBY for its lack of clarity over the origin of opposition and confusion over its precise referent (whether it refers to a belief or attitude towards a development, a behavioural response taken by individuals or the collective action of organized groups) (Devine-Wright, 2009). Therefore, some researchers have stressed the need for a concept that enables deeper understanding of the social and psychologi-

cal aspects related to the phenomenon of NIMBY (Devine-Wright, 2009; Wolsink, 2006). In relation to psychological ownership, NIMBY behaviour can be seen as a consequence of an experienced sense of ownership. In other words, psychological ownership can be among the elements underlying NIMBY reactions and can perhaps also be used to explain the NIMBY phenomenon.

In summary, the concept of psychological ownership can be said to have several connections to related concepts already applied in a natural-resource research context. Some of these concepts even have certain dimensions which are parallel to psychological ownership, while some can be seen more as antecedents or consequences of psychological ownership. Indeed, for its part, psychological ownership can be used to explain certain behaviours like human territoriality and the NIMBY phenomenon. However, when studying feelings of ownership, it is important to understand fully the origins of feelings of possessiveness as well as both the innate and the socially constructed motives contributing to them. Psychological ownership can help to conceptualize these, as none of the proximate concepts presented above seem to fully encompass all the elements of psychological ownership (Table 1). In the context of private forest ownership, the role of perceived control can be seen to play a particularly significant role, as NIPF owners are also the legal owners of the resource and thus can exercise, to a greater or lesser degree, direct control over their forests. In relation to natural resources, psychological ownership also represents a concept with a potentially broader application than physical place alone. The difference between the concepts and their potential use can also be illustrated by examining the potential questions they seek to answer in a research setting (Pierce et al., 2001). Psychological ownership can be linked to the basic question "*what do I feel is mine*?" (Pierce et al., 2001, p. 306), while the other concepts have a slightly different focus. (Table 1.)

In addition, there are some theories related to property rights that can be seen to have links to the concept of psychological ownership or lack of it (e.g. the Theory of Access or Tragedy of Commons). However, as they do not explicitly describe the emotional relationship between a person and an object, being more related to the multidimensional concept of ownership, they are not discussed here.

Table 1. The linkage of the proximate concepts to psychological ownership.

Concept	Motives behind psychological ownership			Potential research questions
	efficacy/effectance (control)	self-identity	"having a place"	
Psychological ownership	X	X	X	What do I feel is mine?
Place attachment		X	X	What does this place mean to me?
Sense of place		X	X	What does this place mean to me?
Psychological distance		X	X	How far do I feel I am from the object in question?
Sense of Belonging			X (part of one of the motives behind psychological ownership)	Where/to which group do I belong into? What is my place in the world?
Human territoriality	consequence of psychological ownership			
NIMBY	consequence of psychological ownership			

3. THE AIM OF THE STUDY

By using the concept of psychological ownership, the aim of this study is to understand possessive feelings towards privately-owned forest resources and therefore to understand the role of those feelings in the behaviour of forest owners and other forest users better (in this case nature-based tourism entrepreneurs). The study also aims to find out how ownership feelings should be taken into consideration in collaborative relationships when introducing potential new uses for forest resources (in this case nature-based tourism), in order to prevent conflicts.

The research questions are thus as follows:

1) How does psychological ownership manifest itself in the context of private forest owners and their forest holdings?
2) How do ownership perceptions affect private forest owners' forest management decisions?
3) Do nature-based tourism entrepreneurs perceive the natural resources they use as "their own" and how is this manifested?
4) What effects do ownership feelings have on cooperation between the parties and how have nature-based tourism entrepreneurs taken them into consideration in their stakeholder management?

The research questions are answered by combining the results of three published journal articles. The contribution of each article to the research questions is presented in Table 2. The original articles are reproduced as annexes to this study.

Table 2. The contribution of each article to the research questions. Each article brings a different perspective to the research questions.

Research question	**ARTICLE 1.** Matilainen, Pohja- Mykrä, Lähdesmäki and Kurki. 2017. I feel it is mine! – Psychological ownership in relation to natural resources. *Journal of Environmental Psychology,* 51, 31–45.	**ARTICLE 2.** Lähdesmäki & Matilainen. 2014. Born to be a forest owner? An empirical study of the aspects of psychological ownership in the context of inherited forests in Finland. *Scandinavian Journal of Forest Research* Vol. 29 Issue 2, 101–110.	**ARTICLE 3.** Matilainen & Lähdesmäki. 2014. Nature-based tourism in private forests: Stakeholder management balancing the interests of entrepreneurs and forest owners? *Journal of Rural Studies* Vol. 35, 70–79.
How does psychological ownership manifest itself in the context of private forest owners and their forest holdings?	The existence of psychological ownership in the context of natural resources.	The manifestation of psychological ownership among private forest owners in case of inherited forests	
How do ownership perceptions affect private forest owners' forest management decisions?		The impact of ownership perceptions to private forest owners' forest management decisions.	
Do nature-based tourism entrepreneurs perceive the natural resources they use as "their own" and how is this manifested?	The existence of psychological ownership in the context of the natural resources.		NBEs perceptions of private forest owners as their stakeholders
What effects do ownership feelings have on cooperation between the parties and how have nature-based tourism entrepreneurs taken them into consideration in their stakeholder management?	The existence of psychological ownership in the context of the natural resources.	The manifestation of psychological ownership among the private forest owners in case of inherited forests.	The cooperation strategies developed by NBEs to maintain cooperation with private forest owners

The results provide new understanding of ownership feelings in the private-forest-owning context and help identify solutions for how the objectives of forest owners and the needs of society for private forest resources could be successfully combined and how traditional recreational activities can be transformed into nature-based business activities without causing conflict or violating social sustainability.

3.1. POSITIONING THE STUDY IN THE CONTEXT OF FOREST-OWNER AND NATURAL-RESOURCE-CONFLICT RESEARCH

This study positions itself in forest owner research primarily by introducing a new approach, psychological ownership, to understand better private non-industrial forest owners' decision making and behaviour. At the same time, it also contributes to the understanding of natural resource conflicts, especially in the context of nature tourism in private forests by providing insights into the role of forest owners as a critical stakeholder group for nature-based tourism entrepreneurs and by revealing the critical elements for a successful relationship between these two parties. (Figure 2.)

During the last 30 years, one of the main strands in **forest-owner research** has been the creation of forest-owner typologies. Such typologies often aim to create a link between forest owners' objectives for their forests and their socio-demographic background and then to further link these to forest management attitudes or behaviour. These typologies can be divided into extensive and intensive typologies. Extensive typologies, which represent the vast majority of forest owner typologies, refer to typologies that aim to generalize forest-owner attributes to large populations, while intensive typologies strive for in-depth understanding of the social and mental phenomena connected with forest ownership (Takala et al., 2017, following Sayer, 2000). Both kinds of typologies aim to improve understanding of the profile of private forest owners and their objectives (e.g. Hänninen et al., 2011 [FIN]; Butler & Leatherberry, 2004 [USA]; Ingemarsson et al., 2006 [SWE]; Boon & Meilby, 2005 [DEN]; Van Herzele & Van Gossum, 2008 [BE]; Hogl et al., 2005 [AUT]; Urquhart et al.,2012 [UK]; Malovrh et. al., 2015 [SLO and SBR]). Also, meta-typologies based on these typology studies have been created (Ficko et al., 2017; Ní Dhubháin et al., 2007; Urquhart et al., 2012).

In addition to forming typologies based on forest owners' background characteristics or objectives, research has focused on the factors influencing these objectives, such as forest owners' values and motivations, and on further linking them to management behaviour. In forest-owner research, motivations and values are typically closely linked as concepts, perhaps somewhat ambiguously, sometimes even used as synonyms, and connected

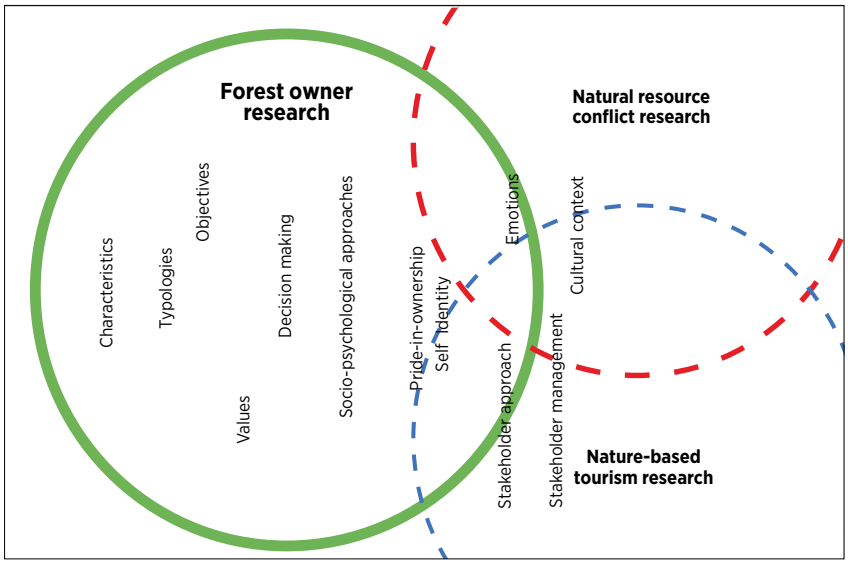

Figure 2. Positioning of this study in the context of forest-owner, natural-resource-conflict and nature tourism research.

further to forest owners' objectives for their forests. For example, in a literature review article summarizing information from predominantly European studies, Ni Dubháin et al. (2007) categorized forest owners' values based on their consumption goals as economic values, conservation values, place-based values, amenity and recreation values, aesthetic and biodiversity values and different mixtures of these values (multiple objective owners). In addition, they mentioned the value of ownership per se as being the motivation of passive forest owners in particular (Ni Dubhain et al., 2007). On the other hand, Bengston et al., (2011) used the National Woodland Owner Survey to group the values and motivations of US family forest owners into environmental values, forest-based recreation, investment and income, "home" as an ownership reason, non-instrumental values (intangible values, psychological experiences and benefits), family motives, farm and ranch and incidental ownership. In addition, several studies have focused on how these different types of forest owners with different values could be reached for advice and/or influenced to ensure that the forest both fulfils the owners' objectives and also meets the needs of society (Boon et. el., 2004; Hujala & Tikkanen, 2008; Leskinen et al., 2009).

Even though typologies provide valuable information on forest owners and the nature and prevalence of their values and/or objectives, it has been increasingly suggested that neither the background characteristics nor the objectives or values of forest owners are enough to predict forest owners' behaviour. Indeed, several studies have reported (e.g. Church & Ravenscroft, 2008; Ficko et al., 2017; Hujala et al., 2009) also from other sectors (Bach, et al., 2004; Diamantopoulos et al., 2003), that sociodemographic background characteristics no longer adequately explain values and behaviour. As early as 1994, Bourke and Luloff reported that "*sociodemographic characteristics, use of the forest, and ownership status have little influence on attitudes toward management*". In addition, often forest owner typologies have been found to capture only the most salient motivations for ownership, thereby leaving many underlying motivations undetected (Ficko et al., 2017). Therefore, other approaches are also needed.

Thus, in addition to the personal characteristics of forest owners, another major strand of research has focused on the decision-making process of private forest owners. Several scholars have concentrated on creating and utilizing diverse types of multi-criteria decision-making or decision-analysis methods (MCDM or MCDA) (e.g. Kangas & Kangas 2005; Kurttila et.al., 2000; Mendoza & Martins, 2006; Pattanayak, 2003; Pukkala & Kangas, 1993). In these, to put it in a very simplistic way, forest owners' objectives for the use of their forests are mapped out and criteria for measuring these objectives are formulated. Then, different decision alternatives are created (for example for forest management), which are scaled to commensurable form and weighted with certain values for ranking. Finally, a mathematical algorithm is used to calculate the optimal solution for fulfilling the forest owner's objectives (Ananda & Herath, 2009). The same approaches have also been widely used in natural resource management (Anselin et al., 1989; Duke & Aull-Hyde, 2002; Prato et al., 1996). These models can help to map out the problem and its nature and relationships in complex, human-centred systems (Checkland, 1984; Mendoza & Prabhu, 2006). However, these approaches often assume that forest owners or the stakeholder groups make decisions in a rational way, based on profit or utility-maximization theories (Beach et. al, 2005) and that decision making is rather immune, for example, to the social norms of the environment and changes in it (Ananda & Herath, 2009; Mendoza & Martins, 2006 ; Rosenhead, 1989).

Consequently, other approaches to the forest owners' decision-making processes have also been adopted. For example, research has focused on the role of knowledge, networks, lifestyle and social "environment" (e.g. Butler et al., 2007; Hujala et al., 2007; Hujala & Tikkanen, 2008; Häyrinen et al., 2016; Korhonen et al., 2012; Primmer & Karppinen, 2010). In the Finnish context, Hujala et al. (2007) found that forest owners may apply a different decision-making mode depending on the situation and the decision in question. This is in line with traditional behaviour research (Fishbein & Ajzen, 2011; Ryan & Deci, 2000). According to the widely-recognized theory of planned behaviour (TBP), values or objectives are not the only factors influencing a person's decision making or behaviour; rather the process is much more complex (e.g. Fishbein & Ajzen, 2011). The values are intermediated to intentions through various kinds of beliefs, which create, via attitudes, the intention to form a certain behaviour. The theory also recognizes the significant influence of perceived norms and perceived behavioural control on intentions to engage in certain behaviour (Fishbein & Ajzen, 2011). For example, perceived norms have been found to affect forest owners' willingness to provide recreational opportunities on their land in England (Church & Ravenscroft, 2008) and forest owners' intentions to implement timber stand improvements (Karp-

pinen & Berghäll, 2015). Furthermore, forest ownership is not a static state. Several studies report the effect of life-cycle or cohorts on both forestry behaviour and attitudes towards forests (Butler et al., 2016, Butler et al., 2017; Karppinen, 2012).

As the forest owners are perhaps more diversified than earlier estimated (e.g. Hujala et al., 2007) and the assumption that forest owners will aim to maximize their utility in forest decisions may not be valid (Burton, 2004; Hujala et al., 2007; Markowski-Lindsay et al., 2016), forest owner research has also increasingly adopted more sociological or psychological approaches. Several scholars have used the above-mentioned theory of planned behaviour to analyse forest owners' intentions to engage in a certain activity. These include, for example, intentions for stand improvements (Karppinen and Berghäll, 2015), NIPFs' intentions to participate in carbon trading (Thompson & Hansen, 2013), intentions to provide bioenergy biomass (Brough et al., 2013), the social availability of woody biomass (Becker et al., 2013), forest owners' choice of reforestation (Karppinen, 2005), and foresters' attitudes towards and social norms in biodiversity conservation (Primmer & Karppinen, 2010). In fact, in 1987 Young and Reichenbach already used TPB to analyse forest owners' harvesting intentions. In addition, some studies have also measured actual past behaviour and its link with future intentions (e.g. Knoot & Rickenbach, 2011; Munsell et al., 2009). Moreover, other sociological approaches have also been used. For example, Bjärsting and Kvastegård (2016) attempted to understand forest owners' need for collaboration related to their forest's social values by using collaborative governance as the theoretical background. On the other hand, Van Herzele and Aarts (2013) used Luhmann's theory of self-referential social systems (Luhmann, 1990) to analyse how small forest owners cope with the policy regulations set for their forests, and Hokajärvi et al. (2009) used Activity Theory to understand forest planning as a social structure. All these approaches have increased our understanding of human behavioural approaches in forest owner research. For its part, the theory of psychological ownership and its implementation in the present study contributes to the above-mentioned literature by introducing a new social-psychological approach to the discussion.

The idea of ownership values and their central role in forest ownership is nevertheless not completely novel. At the beginning of the 1990s, researchers had already recognized pride-in-ownership as one of the more important values for forest owners (Sime et al., 1993; Wigley & Sweeney, 1993). The mental connections between forest holdings and their owners have also been investigated by using the concepts of self-identity, place attachment, link to the family/heritage, sense of land custodianship and sense of ownership (Bengston et al., 2011; Church & Ravenscroft, 2008; Ross-Davis et al., 2005). Introducing psychological ownership in the context of private forests takes this research one step further by providing a new conceptual approach for analysing these ownership feelings in more depth. Previous research mainly discusses ownership as a vague concept or fails to focus on possessive feelings directly. The psychological ownership approach enables the phenomenon to be conceptualized better.

In the forest context, this study also provides an additional approach to **natural-resource conflict research** relating to the role of emotions and cultural context (e.g. Bodtker & Jameson, 2001; Hellström, 2001; Jehn, 1994). Indeed, it has been stated that conflicts over pure environmental issues are in fact rare (Hellström, 2001) and that the dimensions of conflict do not simply concern economic or leisure interests but also aspects related to urban-rural tensions, cultural aspects, institutional change and the disparity between dominant ecological-technological expertise and subordinate forms of local knowledge (Skogen & Krange, 2003; Watts et al., 2017; White et al., 2009; von Essen et al., 2015). There is also a large body of literature focused on conflict situations which arise when local use of a resource is threatened by changing global demands for the same resource (see e.g. Dahdouh-Guebas et al., 2006; Dowie, 2011; Grau & Aide, 2008). Regardless of this, at a practical level, the suggested solutions for natural resource conflicts still often continue to focus solely on evidence of impacts or management interventions and are often based on the assumption that the persons or groups involved will act in a rational way based on economic valuation (Pohja-Mykrä, 2014). In the behavioural sciences, on the contrary, there is a long history of understanding conflict as a multidimensional, even partly unconsciously produced, phenomenon (e.g. Doise et al., 1998; Thomas, 1992). For example, it has been found that in conflicts between self-interest and concern for others, these two influence human behaviour through different cognitive systems. Self-interest is automatic, viscerally compelling, and often unconscious, while obligations to others involve a more thoughtful process. This automatic nature of self-interest often gives it a primal power to influence judgment and makes it difficult for people to un-

derstand its influence on their decision making (Moore & Loewenstein, 2004). Thus, instead of viewing a conflict situation purely as consisting of disagreements or differences of opinion or as interfering or obstructive behaviour, such situations should be viewed as a more complex combination including several emotions (Barki & Hartwick, 2004). Indeed, previous research has emphasized the importance of the role of emotions and the cultural context of conflict situations (e.g. Bodtker & Jameson, 2001; Hellström, 2001; Jehn, 1994). This study provides, for its part, new information and a conceptual tool for understanding conflict situations related to the multiple use of forest resources. Such conflicts can arise from anticipated or actual economic loss for private forest owners or from other use that hinders or disturbs forest owners' own use of their forests. However, often these conflicts relate to violations of the ownership feelings experienced. When owners lack a sense of final control over the use of their land areas, they feel their rights as land owners have been violated (Valkonen, 2007). It can be argued that these ownership feelings and an understanding of their role can play a significant part in successful cooperation between different stakeholders as well as in conflicts related to the use and management of natural resources.

In addition, this study connects to the large body of **research on nature-based tourism**, more specifically to research related to understanding stakeholder management (e.g. Byrd, 2007; McComb et al., 2017; Silva & McDill, 2004) and the social sustainability of nature-based tourism (e.g. Jamal & Stronza, 2009; Tolvanen et al., 2004).

4. THE CONTEXT OF THE STUDY

To help elucidate the phenomenon of psychological ownership in a private forest ownership framework, this chapter provides a short overview of the contextual background of the study by describing in more detail private forest ownership in Finland and the framework of nature-based entrepreneurship in private forests.

4.1. PRIVATE FORESTS AND FOREST OWNERSHIP IN FINLAND

In Finland, private forest ownership has been significant for at least the last 100 years. As early as 1920, over half the country's forest land was owned by private family forest owners (Reunala, 1975), and with the Settlement Laws (1922 and 1935) and the privatization of state land during and after the Second World War, the proportion of private forest ownership further increased (Holopainen, 1971). Currently, approximately half (53%) the forestry land[2] and 61% of the forest land[3] in Finland is owned by non-industrial private forest owners. Of the forest land used for wood production, the proportion of NIPF ownership is even higher, at 67%, and thus NIPFs control a significant amount of the country's forest and timber resources. Most private forests are located in Southern and Central Finland. In these areas, approximately two-thirds of forests are privately owned, and in some areas of Southern Finland, this figure is as high as 90% (LUKE, 2015).

There are approximately 632 000 non-industrial private forest owners in Finland (counted from forest holdings of over 2 hectares, including those who share ownership in one way or another (Leppänen & Torvelainen 2015). The average holding size (counted from forest holdings of over 2 ha) was 30.1 ha in 2013, which is the most recently-available figure. The average age of Finnish forest owners has been increasing for the last 10 years, and was 60 years in 2009 (Hänninen et al., 2011; Karppinen et al., 2002). Forty-four per cent of forest owners are women (Karppinen & Hänninen, 2017), and at present, pensioners are the biggest forest-owner group (45%), followed by paid employees (30%) (Hänninen et al., 2011). Most forests change owners through inheritance or purchase from close relatives (85%), with only 15% exchanging hands on the open market (Hänninen et al., 2011). Often forests are also divided between heirs, resulting in the increasing fragmentation of forest ownership. At the moment, 61% of all private forest holdings are under 20 hectares (Leppänen & Torvelainen, 2015), and there was particular growth in the number of holdings under 10 hectares between the years 2006 and 2013 (LUKE, 2015).

Karppinen et al. (2002) conducted a wide-ranging survey of Finnish forest owners' objectives based on data from 1999, which was repeated by Hänninen et al. in 2009. In his study, Karppinen divided Finnish forest owners into five groups based on their objectives for their forests: 1) "income from forests", 2) "forest owners emphasizing economic security", 3) "recreational users", 4) "forest owners with multiple objectives" and 5) "indifferent forest owners." Group 1 highlights the use of forests as a source of livelihood and employment, even though it might not be the owner's main source of income. The second group also focuses on the economic use of forests by highlighting the security that forest holdings provide to owners' personal finances as a "bank". The third group, on the other hand, can be seen as having a hedonistic approach emphasizing the aesthetic and other immaterial values of nature and rural regions. The fourth group, forest owners with multiple objectives, represents forest owners who emphasize both material (economic) and immaterial values. In addition, a fifth group was found which included uncertain or indifferent forest owners with no specific objectives for their forest ownership. Based on the data from 2009, Hänninen et al. (2011) found that the profile of Finnish forest owners had changed in the intervening 10 years between the two studies (Hänninen et al., 2011; Karppinen et al., 2002). The number of pensioners and paid employees living relatively far away from their forests had grown and the number

2 Forestry land: land that does not have any other special purpose; i.e. it is not agricultural land or built land. Forestry land includes forest land, poorly productive forest land, unproductive forest land and other forestry land (forest roads, storage areas etc.) (Statistical yearbook of forestry, 2014)

3 Forest land refers to a forest in which the potential annual increment for the rotation period is at least 1 cubic metre per hectare per year (Statistical yearbook of forestry, 2014)

of farmers had decreased. Interestingly, however, there was little change within forest-owner types based on their objectives. Nevertheless, the results indicated that the most active forest owner group was slightly decreasing (Hänninen et al., 2011). In 2009, the fourth group covered 30% of forest owners, who held 40% of the forest land area in Finland. Ten per cent of forest owners were classified as indifferent (Hänninen et al., 2011).

Even though the legal ownership structure of Finnish forests is generally quite clear, legislation and regulations exist that set limitations on forest owners' sole control over their forests. As examples of these can be mentioned the Forest Law (Forest Act 1996/1093, modified from the beginning of 2014, [Laki metsälain muuttamisesta 1085/2013]), which bans deforestation, requires obligatory reforestation after clear cutting and imposes some limitations on permissible forest management practices. Forests are one of the more important natural resources in Finland, and the importance of forest product exports to the economic development of the nation has been notable, even from a global perspective (Palo et al., 1999). Thus, the aim of the legislation has largely been to improve and maintain forest resources and the competitiveness of the forest sector (Mattila et al., 2013). When the forest law was updated in 2014, the new law gave forest owners more freedom in relation to forest management practices. This, in turn, provided more opportunities for forest management to take into consideration benefits other than wood production (Saaristo & Vanhatalo, 2015). Equally, nature conservation legislation may set limitations on the use of privately-owned forests, regardless of forest owners' own willingness to protect the natural environment or endangered species. In addition, Everyman's Rights guarantee free public access to forests regardless of who owns them.

4.2. EVERYMAN'S RIGHTS AND NATURE-BASED TOURISM IN PRIVATE FORESTS

Everyman´s Rights are based on the principle of public right of access to nature and on some laws and regulations related to the use of nature (e.g. the Criminal Code of Finland, Nature Conservation Act, Constitution of Finland, Water Act, Cross-country Traffic Act). As Everyman's Rights are a commonly agreed way of using nature, rather than an actual subjective right which has been especially granted to someone and realized through legal regulations, they can also be called the "right of public use" (Laaksonen, 1999). The roots of Everyman's Rights derive from an ancient custom allowing free travel in roadless country, including the right to stay overnight and gather nourishment (Tuunanen et al., 2012). This custom also forms a large part of the current land and natural resource utilisation culture in Finland, even though changes have occurred over time.

The utilisation of nature for recreation has a long tradition in Finland, and this role is continuously growing. According to Sievänen and Neuvonen (2011), up to 96.5% of the Finnish population utilise nature for recreation, and 75% of Finns use it based on Everyman's Rights. Everyman's Rights allow hiking, biking or skiing in natural areas and the picking of wild flowers, berries and mushrooms, regardless of who owns the area. Everyman's Rights also entitle people to ice fish, angle, boat, and swim freely. Everyman´s Rights apply to both Finns and non-Finnish nationals alike. However, Everyman's Rights do not extend to causing damage or disturbance in natural areas or to producing unreasonable disadvantages to the forest owner. For example, Everyman's Rights do not permit the killing or disturbance of animals, damage to growing trees or the collection of moss, herbs or wood without the landowner's permission. It is also forbidden to make an open fire, to drive with a motorized vehicle without a permission or to disturb privacy by being too close to settlements (e.g. Laaksonen, 1999; Mäntymaa 1998; Tuunanen et al., 2012). In addition, Everyman's Rights are based on occasional rather than regular use of forests.

The above-mentioned concepts of unreasonable disadvantages and regular use are nevertheless very much open to interpretation (see e.g. Lehtonen et al. 2007). Therefore, to some extent, Everyman's Rights also enable the utilisation of natural resources for business activities without the forest owners' permission. For example, commercial berry picking using foreign pickers has raised much discussion in the media and among policy makers and local residents (La Mela, 2014; Peltola et al., 2014; Stens & Sandström, 2013). Similarly, engaging in nature tourism activities based on Everyman's Rights has been a grey area (see e.g. Viljanen & Rautiainen, 2007), with different interest groups having their own interpretations of it (Lehtonen et al., 2007). The spirit of the guidance from the Ministry of Environment (2012) has been that if the use of nature is non-intensive (thus leaving no significant visible marks on the forest) or is random, for example, in the case of some hiking activities, the landowner's permission is not required (Tuunanen

et al., 2012). Even though this interpretation of Everyman's Rights sets the regulative framework for the professional use of forests for nature tourism, it is still open to a range of interpretations. Accordingly, 50% of Finnish nature tourism entrepreneurs have reported facing property-rights-related problems vis-a-vis private forest owners (Nousiainen & Tyrväinen, 2002).

Nature-based tourism as an industry sector has been one of the fastest growing tourism sectors worldwide in recent years. This growth is set to continue in the future, with tourists increasingly valuing pure and authentic natural environments (CREST, 2016; Dodds et al., 2010; Fredman & Tyrväinen, 2010; O'Neill & Alonso, 2009; Ryymin, 2008). Nature-based tourism can be broadly defined as tourism, the main activities of which are related to nature (Fredman et al. 2012; Andereck, 2009; Saarinen, 2001). It is also the form of tourism that often provides direct benefits to the economy of remote rural areas. The income from nature-based tourism typically remains in rural regions, the sector is labour intensive, and it usually requires a strong local knowledge base (e.g. Courtney et al., 2006; Iorio & Corsdale, 2010; Matilainen et al., 2016; Saarinen, 2003). These characteristics make it especially interesting for rural development, and the sector is highly promoted in tourism strategies.

The natural resources used in nature tourism activities are seldom owned by the entrepreneurs themselves due to the requirement of large land areas for many such activities. Thus, approximately 80% of nature-based tourism entrepreneurs in Finland have reported using land areas they do not own (Nousiainen & Tyrväinen, 2002). The natural resources utilised can be a forest area, landscape or wilderness as such or other natural resources like wild animals, fish or other non-wood forest products. As two thirds of the country is covered by forests, they are also one of the main environments for nature-based tourism. In Finland, nature-based tourism utilizes both state-owned and privately-owned forest lands, but due to the landownership structure, the pressure to use private forests for nature tourism is particularly high in Southern and Central Finland (Tyrväinen & Sievänen, 2007).

Even though Everyman's Rights enable some nature tourism activities without the forest owner's permission, forest owners have the legal right to regulate activities in their forests, especially in the case of intensive business activities. In addition, the forest owner can easily disturb the nature tourism activities on their land, for example by forest management activities, if they wish to do so. Nature-based tourism entrepreneurs, on the other hand are in many cases dependent on privately-owned forests in their business activities, whether they operate under Everyman's Rights or with the forest owner's permission. Thus, the current interpretation of the property rights provide both opportunities and challenges for business development. The main challenge is how to maintain sustainable business activities in the long term, when the key resource of production is owned by someone else.

As resource holders, private forest owners are a critical stakeholder group for nature-based entrepreneurs. Despite this, cooperation between the parties is typically quite informal, and the stakeholder role of forest owners is not always recognised by entrepreneurs. Currently it is also unusual for entrepreneurs to pay the forest owner for nature tourism activities. Moreover, when such payment is specified in an agreement, the economic benefits to the forest owner are usually marginal compared to other income gained from the forest resource, such as timber production or even voluntary conservation schemes. Cooperative relationships therefore tend to be asymmetrical. The entrepreneurs' survival depends on access to private forests, while the benefits to forest owners are essentially non-existent. Aside from the economic benefits, the forest owners have many other values and purposes for their forests, which sometimes even override the economic aspects (Ni'Dhubhain et al., 2007). Thus, the economic compensation or lack of it, is not the only factor effecting to the cooperative relationship between the nature tourism entrepreneur and private forest owner. Instead this relationship depends on several other issues stemming from the complex values that owners hold in relation to their forests (e.g., Bliss & Martin, 1988, Kline et al., 2000; Ni'Dhubhain et al., 2007).

One explanation for this oversight in nature-based entrepreneurs' stakeholder management regarding private forest owners may originate from the traditions of nature use in Finland. Due to these traditions, people other than forest owners often set demands for the use of forests and perceive natural resources as "public goods" in general. In other words, they can also experience ownership feelings towards privately-owned forests, even though they do not necessarily have any legal property rights towards the resources. The same applies to the users of private forests based on Everyman's Rights. This can endanger the socially sustainable use of forest resources in a wider sense and cause tensions and even conflicts when recreation activities are developed into nature tourism products and a price is put on traditionally free activities.

5. MATERIAL AND METHODS

The ontological approach of this study can be described as subtle realism (Hammersley, 1992). In other words, social phenomena are seen to exist independently of people's representations of them, but they can only be accessible through these representations. Subtle realism has thus been defined as a variant of realism which also contains influences of idealism (or nominalism) (Burrell & Morgan, 1993). Relating to its epistemological stance, the study aims for emphatic neutrality, meaning that while it recognizes that qualitative research can never be purely value-free, the study nevertheless strives for objectivity and attempts to make the assumptions of the researcher as transparent as possible (Burrell & Morgan, 1993).

The aim of this study is to understand the phenomenon of psychological ownership in the context of a natural resource, namely in privately-owned forests. The inspiration for the study initially came from a collection of interesting findings on every day natural resource use and management, which could not have been properly explained with the existing conceptual tools. To capture these situations in depth, a new theory from another sector was introduced. This theory has been used as a framework in analysing the data, even though the aim has also been to be open at all times to other findings. Therefore, it can be said that the study has some deductive characteristics. However, the study does not aim to verify or falsify the theory of psychological ownership (Patton, 2002) as such, but rather to understand the phenomenon, which brings it closer to abductive research orientation. Especially in the individual articles does not primarily aim to develop any actual novel theory however, which is sometimes strongly highlighted in the abductive research approach (Ong, 2012). This said, this introduction section nevertheless summarizes the findings of all the individual original articles in order to answer the research questions posed for this study and thus also provide some insights to the theoretical framework. The contribution focuses especially on insights of the theoretical framework in the context of natural resources. Therefore, the research approach can be concluded to have features of the abductive approach (Kennedy & Thornberg, 2017).

The approach to the research methodology can be described as pragmatic (Seale, 1999); i.e. the aim has been to select the most suitable research method to answer the research questions. As the problem is to understand and illustrate psychological ownership and its role in relation to natural resources and their management, a qualitative approach was seen as the most suitable and informative (Patton, 2002). Qualitative research typically aims for a holistic approach to phenomena and aims, in particular, to answer the questions 'how' and 'why' (see e.g. Burrell & Morgan, 1993; Cuba & Lincoln, 1994; Patton, 2002). It also seeks to understand the phenomenon in question from the perspective of those experiencing it (Vaismoradi et al., 2013). However, the drawback of this approach is that neither broad generalisations nor direct causalities can be found from the results (Denzin & Lincoln, 1994).

5.1. THE INTERVIEW DATA

The study data were derived from three interview datasets: thematic interviews with private forest owners, nature tourism entrepreneurs, and a dataset consisting of bear watching entrepreneurs and hunters' representatives. It is based on two national research projects conducted during 2009–2014 in Finland (Nature-based Entrepreneurship in Private Forests, and The Sustainable Social Environment and its Challenges in Carrion Baiting of Large Carnivores). The data have been used in the three articles, as presented in Table 3. In Article I, two datasets were introduced to illustrate the existence of psychological ownership in the context of natural resources. The first dataset consists of 12 interviews with private forest owners who have a cooperative relationship with nature tourism companies and 10 interviews with nature-based tourism entrepreneurs. The second dataset consists of interviews with three bear-watching entrepreneurs and four hunters' representatives. In Article II, interviews with those forest owners who inherited their forests were used, while in Article III the nature-based entrepreneurship data are analysed in more detail.

All the interviews were recorded with the permission of the interviewee. After recording, they were fully transcribed in order to guarantee rich data and to allow for precise analysis. In addition,

Table 3. The use of the data in different articles.

	ARTICLE I	ARTICLE II	ARTICLE III
Interview data I, private forest owners (n=17)	Only the forest owners cooperating with nature-tourism entrepreneurs (n=12)	Only the forest owners who inherited their forests (n=15)	
Interview data II, nature-tourism entrepreneurs (n=10)	n=10		n=10
Interview data III, 3 bear watching entrepreneurs and 4 hunters' representatives (n=7)	n=7		

for all the interviews semi-structured frameworks of themes were created, which allowed rather flexible conversations to occur while still ensuring that all the key issues were discussed with every interviewee (Hirsjärvi & Hurme, 1982).

Interview data I, private forest owners (Articles I and II)

The data consist of 17 thematic interviews with private forest owners. The sampling of the interviewees was made through a purposive sampling approach in order to ensure manageable and informative data (see Patton 2002). The private forest owners who were interviewed can be divided into two categories: those collaborating with a nature-based entrepreneur and those who had refused to allow their forest to be used for business activities not included within Everyman's Rights. The interviews were conducted between October 2008 and March 2009. The size of the forest areas owned by the interviewees varied considerably: from 5 hectares to 480 hectares. The duration of forest ownership was rather long, as most of the interviewees had owned their forest areas for 20 years or longer. Moreover, it was typical for the interviewees to have inherited the forest areas (15/17) and for ownership of the area to have remained quite stable ever since. Thus, after inheriting the forest area, most interviewees (9/15) had neither sold any part of their forest land nor were planning to sell it. The interviewees usually either legally owned the forest alone or with their spouse. The forests were located in six regions of Finland, mainly in the central parts of the country (the regions of Kainuu, Pohjois-Savo, Central Finland, South Savo, Southern Ostrobothnia and the Tampere Region). In most cases, the forest owners lived near (usually in the same municipality) to their forest areas, while only three lived in a different region from where their forest was located. The data are described in more detail in Articles I and II.

Interview data II, nature tourism entrepreneurs (Articles I and III)

The dataset includes 10 in-depth interviews with nature-based tourism entrepreneurs. The sampling of the interviewees was made by following a purposive sampling approach. Thus, the entrepreneurs represented several kinds of nature-based tourism businesses that were located in several geographical areas of Finland (Central Finland, Kainuu, Central Ostrobothnia, the Tampere Region and Northern Savo) and provided a range of nature-based tourism experiences, such as hiking, climbing, canoeing, riding, motor safaris, and wildlife watching and hunting. The average age of the businesses (at the time of interview) was 9.5 years. The oldest business had been established 17 years before, while the youngest was only three years old. The enterprises were small when measured according to the number of employees, the average being two full-time employees. Nevertheless, it should be noted that many of the businesses had several part time employees during the season. The number of forest owners with whom the entrepreneurs collaborated varied considerably. Thus, in some cases the entrepreneur had only a couple of collaborating partners, when the operation of some entrepreneurs covered more than 100 forest owners' land areas. The data are further elaborated in Articles I and III.

Interview data III, three bear watching entrepreneurs and four hunters' representatives (Article I)

The third dataset consists of interviews with bear watching entrepreneurs (three interviews) and local hunters (one interview) conducted in 2008 in

Eastern Finland (the Kainuu and Northern Karelia regions). The data related to the local hunters were strengthened by three additional interviews conducted at the beginning of 2017. This was seen as necessary to ensure the validation of the hunters' representative data. The interviewees were selected by using purposeful snowball sampling. The aim of this sampling method is to locate information-rich key informants (Patton, 2002), which was seen as vital, as the purpose was to find rich data related to the study questions and discussion of these two stakeholder groups related to bear watching activities, involving the use of carrion baiting. The age of the representatives of the bear-watching companies interviewed varied from one to 19 years. Thus, the data included both mature businesses and new companies. The size of the companies measured according to the number of employees varied between two and seven, including seasonal employees. The regional hunters' representatives interviewed were either the heads of the local hunting clubs or game management associations. The data are further explained in Article I.

5.2. ANALYSIS

The analysis used in all the articles is generally based on thematic analysis. In Article I, the method of analysis nevertheless includes features of deductive qualitative content analysis. As content analysis can be defined as a general term for different strategies used to analyse text (Powers & Knapp, 2006), some further clarification is in order. The analysis applied in Article I did not aim to quantify or count the frequency of occurrence of the selected themes from the qualitative data, as a propose relevant to the qualitative content analysis (Vaismoradi et al., 2016). Rather, the aim was to identify themes from the data that illustrated psychological ownership and gain new understanding of and insights into the phenomenon (Elo & Kyngäs, 2008; Vaismoradi, 2016). Therefore, the approach came close to that of thematic analysis (Vaismoradi, 2016). However, the coding of these themes was generally based on earlier research (Pierce et al., 2001, 2003). Thus, in this case, the aim of the qualitative data analysis process was to sort and categorize the data according to the psychological ownership theory of Pierce et al. (2001). Moreover, the study was exploratory in nature, as it aimed to identify the phenomenon of psychological ownership in the context of natural resources, a framework in which little, if any, previous research has been conducted (Patton, 2002).

Articles II and III follow the thematic analysis approach presented by Braun and Clarke (2006). Thus, thematic analysis is understood as an independent descriptive qualitative method for analysing the content of the data and identifying and reporting patterns in the data (Braun & Clarke, 2006; Elo & Kyngäs, 2008; Hsieh & Shannon, 2005). This approach also enables the incorporation of both manifest and latent aspects in the analysis and provides a theoretically flexible method of analysing qualitative data, meaning that it can be conducted both within realist and constructionism (nominalistic ontological position) paradigms (Braun & Clarke, 2006).

In Articles II and III, the thematic analysis further resulted in the construction of qualitative typologies, in which after seeking patterns, categories, and themes in the data, the typologies are formed based on these (Patton, 2002). Such typologies are a recognized way to organize and present the results of qualitative research. Typologies are built on ideal types or illustrative endpoints and can be seen as sets of ideal types that an observer can use as mental tools to simplify and organize a complex picture of reality (Boon et al., 2004). Each type represents a unique combination of the attributes that are believed to define the phenomenon (Doty & Glick, 1994, p. 232), and therefore they provide a simple method for presenting qualitative comparisons (Patton, 2002). They are especially helpful in describing and explaining the segmentation of the social world in the way that phenomena can be characterized or differentiated when there is a need to highlight differences between complex groups (Patton, 2002). Thus, typologies and their characteristics emerge from the data during the analysis instead of being decided on beforehand. The aim is to illustrate the results, not to make any far-reaching generalizations.

In each article, data analysis began by reading through the interview data carefully. After this, the data were coded, and excerpts related to the theoretical approach of each article (psychological ownership in Article I and II and stakeholder theory in Article III) were distinguished and marked from the data. Nevertheless, despite the theoretical framework introduced in the articles, all the relevant extracts for each theme were collected. Therefore, in the analysis the aim was also to keep the authors' minds open to any relevant new findings, rather than purely to focus on finding indications related to the theoretical approach that had been used as a framework (Fereday & Muir-Cochrane, 2006). The excerpts were then further combined into wider entities that were used to organise

the data (Article I) and then to build the typologies (Articles II and III). To ensure the reliability of the results, all the phases of data analysis and interpretation in all the articles were a collaborative and iterative effort by the authors (Article II and III) or by the first two authors (Article I). In the case of disagreement, the data were jointly reanalysed until a shared interpretation was reached. Although laborious, this use of analyst triangulation is often considered to increase the credibility of the research (Patton, 2002). Furthermore, as Eisenhardt (1989) argues, the use of several researchers builds confidence in the findings and increases the likelihood of their usefulness. Similarly, Burla et al. (2008) and Schreier (2012) emphasize that the participation of more than one person in the analysis allows for a sounder interpretation of the data. Further elaboration of the data analysis can be found in each article.

6. RESULTS

In this chapter, the results of the articles are organised according to each of the research questions of the study. The results are based on three published articles, each providing a valuable perspective on psychological ownership in the context of privately-owned forests (Table 2). Article I introduces the concept of psychological ownership related to natural resources and studies the benefits of the concept in understanding the antecedents of successful cooperation or potential conflict situations related to the use of natural resources. Article II illustrates the ownership feelings private forest owners have towards their forests and the role psychological ownership may play in private forest owners' behaviour, forest management and openness towards new innovative forest uses. Article III highlights the role of psychological ownership in the cooperative relationship between private forest owners and nature tourism companies, which can be seen as a new innovative use of forest resources.

6.1. PSYCHOLOGICAL OWNERSHIP EXPRESSED BY PRIVATE FOREST OWNERS TOWARDS THEIR FOREST HOLDINGS

The results of this study demonstrate the existence of psychological ownership as a phenomenon in the context of natural resources and privately-owned forests (Articles I and II). Natural resources arouse ownership feelings that are seemingly independent of the legal ownership of the resource. Even though legal ownership provides more opportunities to generate these feelings – for example, in the form of control opportunities – according to the results of this study, legal ownership is not necessary to generate psychological ownership; neither does it guarantee the presence of it. In addition, the private forest owners in this study described different forest holdings in different ways. For some areas, they clearly experienced close emotional connections to and considered them "theirs" or "ours" (referring to family). By contrast, of some forest areas they literally stated that "*that forest has no meaning for me*".

The different motives behind psychological ownership (effectance/efficacy, identity, having a place) can be recognized in the private forest owning context, even though these motives are interlinked with each other, as the theory of psychological ownership also recognizes (Pierce et al., 2003). At a practical level, they are often mediated by the routes leading to the experience of psychological ownership. **The effectance motive** of psychological ownership often manifests itself through the power of control, but in principle the motive arises from the need to influence one's environment (Burger & Cooper, 1979; Leotti et al., 2010). In this study, all the forest owner types other than the indifferent forest owners emphasized their right to manage the forest according to their own values and aspirations and to accomplish the goals they had set for the forest. For some this was management according to forest management recommendations and following a forest management plan, for others the aim to affect their environment was more focused on voluntary, "self-made" conservation or even on maintaining their childhood environment and scenery.

According to the results, forest owners clearly used their forests for **identity** building, maintaining their identity and expressing it to others. However, interestingly, the forest owners used the forests more to build their identity related to the family, home region or "chain of generations" than as a property owner or a forest owner as such. In addition, the results of this study highlight that sometimes maintaining this identity, in fact, was the only reason to keep the inherited forests. The third motive, **"having a place"** *or home*, is also strongly linked to forest owners' legacy and heritage, as it also defines forest owners' "place in time and space" (Pierce & Jussila, 2011). Thus, it is strongly connected with identity element and it was sometimes even difficult to distinguish the two motives separately in the data. However, the forest owners also mentioned using the forest for recreational reasons as "my place to relax" or referred to forest ownership as "a self-evident thing for which they had already been raised in childhood".

In the results, the three routes that lead a person to experience psychological ownership, the opportunity to control, having knowledge of the ob-

ject of ownership and investing oneself (e.g. in the form of time and money) in the object of ownership, provide practical level indications of the existence of psychological ownership. In many cases, the opportunity to **control** the object of ownership is present in the context of private forest ownership, as the person expressing the feelings of ownership is also the legal owner of the resource. Even though Finnish forest owners have accepted certain limitations to their exclusive ownership due to, for example the Everyman's Rights or national policies, the results show that they still wish their ownership to be "respected". This manifests itself in the expectation that other users will ask for permission even when it is not required according to the law or inform them of the other use of their forests well in advance. Forest owners also considered that they had the right to exercise their control, i.e. to place individual limits on the use of their forests, according to their own subjective aspirations and values, regardless of the legislation. Forest owners also highlighted their own independent role in decision-making related to forest management, even though all the forest owners in this study belonged to a local forest management association and the association's advice was often followed. They mentioned that while they might discuss for example, the decision to clear-cut with their family, they made the final decision themselves.

When analysing the control aspect of psychological ownership, it is important to note, however, that what is being studied is perceived control, i.e. forest owners' own perception of the control they possess over their forests, rather than actual legal property rights. Several issues, such as social norms or beliefs, affect perceived control (Fishbein & Ajzen, 2011). According to the results, forest owners feel that certain elements, such as the forest management tradition in their family and how past generations have managed the forest, limit their own perceived control in decision making situations. Similarly, local social pressure can set limitations on the control experienced. The forest owners in this study tolerated the use of their forests by local nature-based entrepreneurs because they came from the same rural village, even though they may not have been very pleased about this use. Moreover, the results of this study (especially Article II) show that forest owners' knowledge of their forests also greatly affected the perceived control related to decision making on their forests: the more **knowledge** the forest owners had of their forests, the more they seemed to experience them as "their own". This knowledge related not only to forest management (what has been or should be done and when and where) but especially to knowledge connected to the history of the forest and its ownership, such as how long it had been in the family and who had bought it. Knowledge is often directly linked to **investing oneself in the object of ownership,** especially time-wise. In this study, the more forest owners spent time in their forest, the more they had knowledge of it, thereby further generating feelings of ownership towards it. Some of the forest owners expressing a lot of psychological ownership of their forests actively spent time in their forest by undertaking forest management. However, recreational use, picnics, and picking berries or mushrooms were also mentioned and seemed to generate feelings of ownership. Investing money in forests, on the other hand, was not brought out as strongly in the interviews as generating feelings of ownership.

According to the results, the forest owners in this study aimed to safeguard their ownership feelings by consciously or unconsciously protecting the routes leading to the experience of psychological ownership. It should be noted, however, that some of the practical ways of safeguarding these routes are related to both legal and psychological ownership, since the two are mutually reinforcing and cannot be fully differentiated (Pierce & Rodgers, 2004). Private forest owners mentioned the following requirements for maintaining successful co-operation between themselves and nature tourism entrepreneurs: avoiding damage, offering compensation (monetary or otherwise), clear agreements and a commitment to them, requesting permission (even if not legally required), regular communication, professionalism and a "good name" on the part of the company, and avoiding disadvantage to the owner. Most of the "requirements" involved the option of having closer control over the potential activities of others in the forests. In addition, access to information concerning activities in the forest was highlighted in most of the methods and in fact the role of effective communication was explicitly mentioned by the forest owners. The interviewees further described communication as an important antecedent of trust. Under the heading "avoiding damage", the forest owners specifically mentioned that the proposed activities should not obstruct their own use of the forest, whether for financial or recreational purposes. The forest owners thus wanted to ensure their continued ability to invest time and other resources in their forest in the future, thereby also enhancing their sense of psychological ownership.

6.2. THE EFFECT OF OWNERSHIP PERCEPTIONS ON PRIVATE FOREST OWNERS' FOREST MANAGEMENT DECISIONS

The results demonstrate that feelings of psychological ownership seem to have influenced the behaviour of forest owners in decision making relating the use of their forests and co-operation between them and other users of forests, such as nature tourism entrepreneurs. In general, the results indicate that the stronger the psychological ownership feelings, the more conscious were the decisions towards management or non-management. This does not mean that forest owners with strong psychological ownership feelings managed their forests more actively or in better accordance with the forest management recommendations, but simply that they "felt strongly" about their selected use of forests and thus were unlikely to be easily convinced about another type of management or use of the forest.

From the data (Article II), four types of forest owners were identified based on two dimensions of psychological ownership: efficacy (control) and identity. The third dimension of psychological ownership, having a place, manifested itself as part of forest owners' identity building, and for this reason, it was integrated under the theme of identity. Similarly, the stimulation was seen as part of the efficiency motive. (Figure 3). The types found were named "restricted forest owner", "indifferent forest owner", "detached forest owner" and "informed forest owner". In *the restricted forest owner* type, a strong forest owner identity is combined with a rather weak sense of control. Thus, forest ownership is considered to be an important part of identity construction and often connects owners to their family history. However, while this link enhances their identity, it also creates emotional restrictions to the autonomous control of the forest. Such forest owners seem to believe that they have a moral obligation to take care of the forest in the same manner as the previous generation in order to maintain the legacy. Among this ownership type, forest management decisions are guided mainly by tradition, and thus new innovations are often unheeded. Therefore, forest management may be either active or passive, depending on the family tradition. *The detached forest owner* type represents forest owners with a weak sense of forest owner identity combined with a strong sense of control. Forest owners in this type do not feel emotionally attached to their forests, but they still want to retain strong control over their possession. The forest does not represent an identity-building element for the owner, and usually there are no forest-related childhood experiences, recreation values, or legacy-cherishing aspects related to the forest. Instead, in this type, forests usually represent an investment and are also treated like one. Thus, forest management is guided by constrained economic decision-making, and therefore forests are usually quite intensively managed. Similarly, this type of forest owner would also sell the land if it were needed to finance another investment.

The informed forest owner represents forest owners with a strong sense of both identity and control. These forest owners usually have good knowledge of their forests and have made personal investments in them. Even if the forests have been inherited, this is not considered to be a restriction to autonomous decision-making power and control over the forest. On the contrary, by exercising control over the forest, these owners believe they are best sustaining their legacy. Thus, forest owners in this type usually have both the knowledge and willingness to take care of their forest area through timber production and/or conservation decisions. By contrast, those in the fourth type, *the indifferent forest owner*, have a weak sense of both identity and control. Even though they are legal owners, forest owners in this type lack a strong sense of the forest being their own. These owners feel no emotional connection with the forest, and possess very limited knowledge of it. Similarly, such owners have made no personal investment in the forest; nor do they spend any time there. These owners' limited knowledge of their forests also influences the sense of control they have toward them, as they are rarely aware of how to manage the forest area in their possession. An inherited forest may also seem like a burden to these forest owners. An indifferent forest owner typically has low motivation concerning all the forest functions, and forest management is usually non-existent.

In general, forest owners who did not use the forest for building identity, maintaining it or expressing it to others were also the owners who were the most likely to sell the forest. On the other hand, in the case of forest owners with a high identity link to their forests, this emotional bond often seemed to hinder ideas of selling the forest even though there was little or no interest in its management. Of the four forest owner types, only indifferent owners can be classified as so-called passive forest owners, assuming that a passive forest owner is considered here as a forest owner who is simply "drifting" and is unable to make decisions related to their forest in one way or another (Kline et al., 2000).

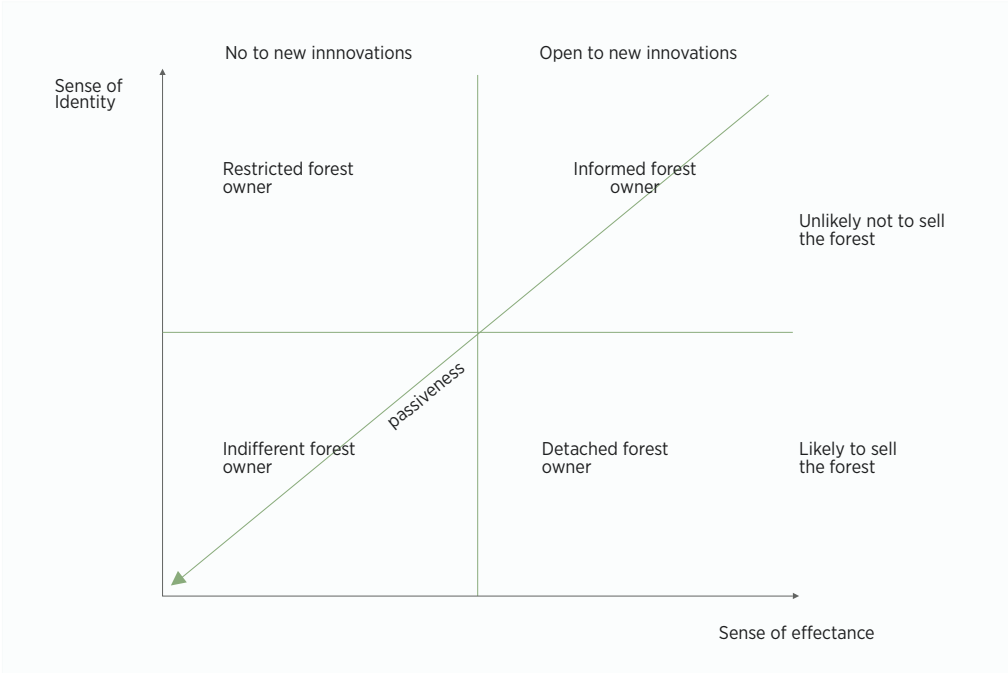

Figure 3. Forest owner types found from the data.

6.3. NATURE TOURISM ENTREPRENEURS' PERCEPTIONS OF FOREST RESOURCES AS THEIR OWN

In addition to forest owners, the results (Articles I and III) also reveal that other users of privately-owned forests, in this case nature-based entrepreneurs, feel psychological ownership towards these resources. The motives which these ownership feelings serve were visible in the data, for example, as entrepreneurs' desire to control the use of the forest resources and their access to it. Some of the entrepreneurs felt that they had the right to use the forest area for their business activities without asking permission from the forest owners, as their activities were small in scale. On the other hand, they also considered that if they had constructed any infrastructure in the forest with the forest owner's permission they had the right to limit other forest use, based on Everyman's Rights, around the area. Both examples reflect the element of *efficacy/effectance* of psychological ownership. Some entrepreneurs also seemed to use the forests involved in their business activities to fulfil the identity motivation of psychological ownership. In these cases, for example, they justified not requesting permission for forest use on the grounds that their business activities did no harm to the natural environment and that they always treated it with respect. This indicated that these entrepreneurs had constructed their own *identity* as responsible users of forest resources. In such cases, respect for the natural environment seemed to override the respect for private ownership of the area. However, at the same time, the experience of psychological ownership increased the entrepreneurs' responsible behaviour towards the natural environment. Some entrepreneurs also emphasized that their social position in the rural community "entitled them" to use forest areas owned by others for their business activities, which further seemed to strengthen their identity as a key member of local society.

Similar to private forest owners, nature-based entrepreneurs also seemed to actively attempt to strengthen or construct their ownership feelings using the three routes identified by Pierce et al. (2003). As mentioned earlier, some considered they should have more officially recognized rights to control other activities based on Everyman's Rights, such as hiking or picking wild berries, in the area agreed on for their tourism activities. They also called for public regulations to be developed, for example, to prevent a single forest owner from blocking the development of long-distance trails for hiking, riding or snowmobiling. In addition,

they wanted nature tourism to be considered to be a serious business activity requiring special access to forests, similar, for example, to reindeer herding.

Nature-based entrepreneurs also hoped for advance notice of forest owner's logging plans, etc., so they could adapt their own activities accordingly. Sometimes the nature tourism entrepreneurs even indicated that they had a better basic knowledge of the forest than the owners themselves. This clearly contributed to the psychological ownership they experienced towards the forest area, even suggesting that they felt that this knowledge entitled them to the "right" to use the forest. In particular, these entrepreneurs' ownership feelings seemed to increase in tandem with the amount of time they spent in the forest and the investments they had made in a particular area, such as resting places with a campfire or hiking routes.

6.4. THE IMPACT OF OWNERSHIP FEELINGS ON COOPERATIVE RELATIONSHIPS

Based on the results, both private forest owners and nature-based entrepreneurs felt a sense of psychological ownership towards the forest areas they owned or used. This led to the presumption that each group was entitled both to use these resources and to decide, to a certain degree, how they should be used. As practical methods, many of the "conditions for successful cooperation" mentioned by both private forest owners and nature tourism entrepreneurs seemed to safeguard the existence of the routes, leading to the experience of psychological ownership.

Nevertheless, all the nature tourism entrepreneurs interviewed in this study respected the legal ownership of forest owners in their activities. In general, they also accepted that the ownership feelings of forest owners took priority over their own feelings. To safeguard their business activities, they tried to respect these feelings by using various stakeholder strategies rather than provoking a situation of overt conflict, even if this might have been justified under Everyman's Rights. In other words, the entrepreneurs' ownership feelings were inclusive rather than exclusive: they recognized that someone else also had feelings of ownership towards the resource in question, even if they seemed to aspire to strengthen their own ownership feelings as well.

Article III presents four stakeholder management strategies used by nature tourism entrepreneurs to manage forest owners. These types were named the "proactive", "adaptive", "negligence", and "community" strategies. Through these strategies, the nature tourism entrepreneurs aimed to balance cooperation and minimize risks in their long-term activities.

Proactive strategy

In the proactive strategy, the entrepreneurs clearly acknowledged the power of forest owners as critical stakeholders.[4] As the owner of the main natural resource used by the tourism company, forest owners were seen to have great utilitarian power to influence the operation of businesses. Similarly, the entrepreneurs recognized the legitimacy of the expectations and needs of forest owners. A characteristic of this strategy was the entrepreneurs' aim to anticipate these expectations and needs beforehand, i.e. before the forest owner expressed them directly to the entrepreneur, Thus, the forest owners' claims were regarded as extremely urgent. Consequently, forest owners' expectations and concerns were actively addressed in the entrepreneurs' business decision-making. This required active stakeholder dialogue, which the entrepreneur initiated. In this study, companies representing the proactive strategy were typically very professional, operating year-round and employing staff on both a seasonal and annual basis.

The cooperation practices in the operational level were much like in any business-to-business relationship, with written agreements, if possible, and contractual rights. The entrepreneurs were ready to compensate for their use of the forests either with money or other benefits, such as lending canoes or other equipment to the forest owners for free. Additionally, the value of public relations (PR) work was highly recognized, and the companies valued their good reputation among forest owners. Smooth cooperation was seen as part of the quality guarantee of the products: satisfied forest owners were unlikely to create obstacles to the use of their forest or cause disturbances during nature tourism activities. These entrepreneurs also sought to anticipate potential problems in their product development. For example, they explained in detail to forest owners the kind of nature tourism activities they planned to implement and even demonstrated it to them before the activities were commercial-

4 The critical stakeholder, according to Mitchel et al., 1997, is defined based on the utilitarian power of the stakeholder, the legitimacy of the stakeholder's claim and the level of urgency with which the claim has to be handled.

ized. On the other hand, entrepreneurs using the proactive strategy expected their contractual rights to use the agreed forest areas not to be challenged. Moreover, if agreement was reached on the use of certain facilities, the entrepreneurs expected, for example, potential recreational users to yield. In addition, they expressed the opinion that private forests should also be used to benefit the local economy in a wider sense. For example, they demanded legislative tools to persuade forest owners to cooperate with local entrepreneurs in order to guarantee business activities and the growth of the tourism sector.

Adaptive strategy

The adaptive strategy was a less active stakeholder management approach than the proactive strategy. Like those utilizing the proactive strategy, the entrepreneurs adopting this approach recognized forest owners as essential stakeholders and acknowledged their legitimacy and power to affect the business. However, they did not anticipate forest owners' expectations and needs beforehand and instead typically dealt with them on an ad hoc basis after they had been expressed. Thus, these entrepreneurs did not react to forest owners' needs with such great urgency as those following the proactive strategy. Moreover, the relationship between the entrepreneur and the forest owner seemed even more asymmetrical than in the proactive strategy: in their own words the entrepreneur was clearly the party required to adapt. Thus, collaboration took place entirely on the forest owner's terms. However, rather than regarding the situation as unfair, these entrepreneurs more often considered it the natural state of affairs.

Typically, entrepreneurs with the adaptive strategy relied heavily on the goodwill of forest owners regarding land use for nature-based tourism. Collaboration between the entrepreneurs and forest owners was based on verbal contracts which were informal and vague in nature. Furthermore, these entrepreneurs did not pay any financial compensation for using the forest areas, and in the rare cases when they offered other compensation (e.g. an opportunity to take part in the activities of the business), this was seldom done on their own initiative but merely in response to the forest owner's requests. However, these entrepreneurs also emphasized the importance of respecting nature and ownership by not harming the forest through their business activities. They also believed that, despite the existence of Everyman's Rights, which they partly interpreted to include their business activities, it was still their moral responsibility to ask the forest owner for permission to use the forest area. Nevertheless, there was little communication concerning the usage of the forest area between the parties. These entrepreneurs were neither aware of the plans of the forest owner nor even expected the forest owner to share those plans. Thus, they acknowledged that their business plans had to be flexible enough to survive any sudden changes in the forest.

Negligence strategy

Entrepreneurs adopting the negligence strategy recognized forest owners' legitimate rights towards their forest areas. However, they did not consider forest owners' power to affect their business activities a major threat. Furthermore, these entrepreneurs rarely considered the urgency of forest owners' potential claims to be very important. Thus, the negligence strategy adopts a passive role when dealing with forest owners as stakeholders. This strategy typically emphasizes that no forest area is indispensable. Therefore, if a forest owner decides to prohibit the use of a certain forest or otherwise causes excessive trouble for the business, another area could always be used. Characteristically, this strategy diminished the dependence between the entrepreneur and forest owner. Typically, such entrepreneurs were unaware of the owners of all the forest areas they used, and the nature of the relationship between the forest owner and entrepreneur was not considered critical to the business's success.

Entrepreneurs utilizing this strategy acted on the basis of their interpretation of Everyman's Rights, which they slightly "extended" to include most of their business activities (such as hiking in the forest or camping on a canoeing trip). These entrepreneurs recognized, though, that their interpretation of Everyman's Rights was probably inaccurate, as it could violate ownership. Nevertheless, they were still willing to take the risk and trusted in the forest owner's goodwill. Also, their business operations were such in nature that they could be transferred to another area, if needed. They further justified the decision not to ask for permission by stating that their business activities did not harm the forest in any way and that nature was always treated with respect. In a way, they felt more responsibility towards the forests than towards the forest owners. In addition, communication between the entrepreneur and the forest owner was almost non-existent. These entrepreneurs did not believe that financial compensation was necessary because the use of privately-owned forests was not considered to be a business relationship. In this

strategy, using forests for business purposes was seen as the utilization of free natural resources whose economic value would not be reduced by this kind of business usage.

Community strategy

As with the other strategies, entrepreneurs following the community strategy recognized the legitimacy of forest owners as a stakeholder group. However, they did not consider forest owners' power to influence their business activities to be a major threat to their businesses. Furthermore, these entrepreneurs did not usually consider the urgency of forest owners' claims to be an important aspect of their stakeholder relationships. Entrepreneurs adopting the community strategy recognized, nevertheless, that access to private forests was critical to their business operations. However, unlike entrepreneurs utilizing the proactive or adaptive strategies, they were not concerned about the continuity of cooperation with private forest owners. Instead, they trusted in the social pressure of the village or the rural area to ensure that forest owners would be open to "one of the last sources of livelihood in remote rural regions." These entrepreneurs thus emphasized the rural community's responsibility to contribute to the success of their businesses, as it was believed to increase the economic activities and well-being of the whole community. Typically, such entrepreneurs had a relatively significant role in village society and thus a potentially strong social influence within the community. Although good relationships with forest owners were highly appreciated, they were often taken for granted, and no major effort was made to maintain them. Thus, from the stakeholder-management perspective, even though the entrepreneur and forest owner might see each other regularly, co-operation between the two parties could still be minimal after permission for business activities had been granted.

Entrepreneurs adopting this strategy did not directly compensate forest owners for the use of their land. They expected that it would be enough to engage in the kind of reciprocity normally existing between rural village residents. Thus, in return for the usage of forests, they were willing to help forest owners with, for instance, various kinds of farm work or maintaining private roads. It must be emphasized, though, that this was not seen as specific compensation for the use of forests, but as "normal assistance between neighbours." Here, collaboration between entrepreneurs and forest owners was based on informal verbal agreements. Entrepreneurs adopting the community strategy nevertheless respected forest owners' rights to make, for example, logging decisions without any notification. They were also ready to change their practices immediately if problems with forest owners or other interest groups, like summer-cottage residents, occurred, to alleviate the situation and fix the problem. However, such problems were mostly dealt with after they had become serious rather than anticipating them in advance. Moreover, entrepreneurs utilizing the community strategy seldom pondered whether their business activities exceeded Everyman's Rights or not. Even though they recognized the limits of Everyman's Rights, they considered forest resources to be the community's joint resources. Thus, local social norms set the actual "limits" on the utilization of free access, which the entrepreneurs understood and tried not to exceed. All the strategies are further elaborated and discussed in Article III.

In the stakeholder management strategies mentioned above, psychological ownership was taken into consideration in several ways (Table 4). The results indicate that the proactive strategy generally seems to avoid overlooking the ownership as a whole, as does the adaptive strategy, by clearly acknowledging the stakeholders' power (whether actual or not) and especially the urgency of forest owners' needs, both of which might not be directly connected to the legal rights of the forest owner. The negligence strategy and the community strategy, on the other hand, can be seen as partly violating both the legal and psychological aspects of ownership by using extended Everyman's Rights and social pressure and ignoring the forest owner as a critical stakeholder. When analysing the strategies in more depth by reflecting on them through the theory of psychological ownership, the proactive strategy avoids blocking forest owners' "access" to all three routes to generate psychological ownership: control, knowledge of forests and the activities occurring within them, and not disturbing the forest owners' own use of forests (i.e. the opportunity to invest oneself into the forests). The entrepreneurs even improved these opportunities by providing recreational facilities or equipment for the forest owners' use. On the other hand, while the negligence strategy acknowledges the control power of the forest owner, it neither supports it nor any other route that leads to the experience of psychological ownership. In turn, the community strategy even diminishes the experienced control of the forest owners towards their forests by using local social pressure.

Table 4. The ways psychological ownership is considered in the different stakeholder management strategies found from the data.

Route to psychological ownership	Proactive strategy	Adaptive strategy	Negligence strategy	Community strategy
Control	Respects forest owners' control power, ask permission, pay compensation	Respects forest owners' control power, ask permission	Respects forest owners' control power, does not ask permission, but does not start a conflict either (changes the place)	Diminishes forest owners' control power by social pressure
Knowledge	Provides knowledge on activities and upcoming plans even before the forest owner asks it	Provides knowledge on the activities and new upcoming plans when asked for	No communication with forest owners	Provides knowledge on the activities and new upcoming plans when asked for
Possibility to invest oneself in the object of ownership	Allows the forest owners to access built facilities and "test" the products, and lends equipment (e.g. snowmobiles) for free	Aims not to disturb forest owners' own use of forests but does not encourage participation in the company's activities.	Aims not to disturb forest owners' own use of forests excessively (so as to avoid questions over the business's activities)	Aims not to disturb forest owners own use of forests too much.

7. DISCUSSION AND CONCLUSIONS

The aim of this study was to investigate ownership feelings towards private forest resources and their impact on the behaviour of both private forest owners and other users of private forest resources, namely nature-based entrepreneurs. In addition, the aim was further to analyse the role these ownership feelings might play in co-operation relationships. Based on the results of this study, it can be concluded that:

1. Both the legal owners and nature-based entrepreneurs utilizing private forest areas seem to have psychological ownership feelings towards these forests. However, these feelings are not necessarily dependent on legal ownership of the resource.
2. Feelings of psychological ownership seem to influence the behaviour of the individuals experiencing those feelings.
3. Recognizing psychological ownership can help in understanding successful cooperative relationships as well as potential conflict situations relating to the use of natural resources.

In the following, these findings are discussed in more detail.

7.1. TRADITIONS IN THE USE OF NATURE CREATING PSYCHOLOGICAL OWNERSHIP IN FINLAND?

The finding that private forest owners have ownership feelings towards their forests is, as such, not very surprising. More interesting is that sometimes they only seem to experience weak feelings of ownership. This result thus supports the prediction of Pierce et al.'s (2003) theory that legal ownership does not necessarily entail psychological ownership. Or vice versa. The nature-based tourism entrepreneurs sometimes seemed to have a strong ownership feeling towards the forests they used even though they lacked the legal ownership of them. The Finnish tradition of providing wide opportunities for the use of natural resources regardless of the owner of the area is probably one reason for other users' psychological ownership towards privately-owned resources today. Indeed, scholars have stated that culture plays a role in the meaning of and motivation for possessions and that there may be cultural differences related to the construct of psychological ownership (Furby 1976; Pierce & Jussila, 2011).

In Finland, rural people have traditionally considered natural resources to be theirs (Peltola et al., 2014). Before the land reform known as the Great Partition ("*Isojako*") began in the 1750s, it was possible to use the joint forest areas, community forests around each village, for individual benefit (Lähde, 2007). Since then, the legal ownership of many natural resources has been more clearly specified on several occasions, but psychological ownership feelings have not necessarily changed accordingly. The Everyman's Rights have no doubt supported the existence of these feelings, as they provide every citizen with access to the routes generating psychological ownership, i.e. the opportunity to use forest areas and gain knowledge of them, even though direct control over the use of the area might no longer exist. As urbanization has proceeded, people may no longer live in close proximity to natural resources. However, they can still consider these natural resources at least partly as their own and feel that they have the right to have a say over their use or management. These developments may also have directed the development of the "nature of social demands for the Finnish forest resources" at the national level. Thus, the culture has not only allowed the development of other forest users' ownership feelings towards private forests, but these feelings are also recognized by forest owners.

The image of the collective ownership is further enhanced by national or regional-level discourse related to "our forest resources". Folse et al. (2012) have empirically demonstrated that such ownership messages can, indeed, induce individual feelings of ownership. At its best, this kind of message will enhance the positive consequences of psychological ownership, such as responsible behaviour (see e.g. Hartley et al., 2016). However, such messages on the other hand, can also lead to discussion of forest owners' rights and responsibilities towards wider society and sometimes even place contradictory social demands on private forest

owners. It can also lead to potential conflicts relating to the use of forest resources. This presents challenges to the policy design regarding the extent to which collective ownership feelings towards private resources should be strengthened, and how to avoid violating the owners' psychological ownership at the same time.

7.2. INFLUENCE OF PSYCHOLOGICAL OWNERSHIP ON THE BEHAVIOUR OF PRIVATE FOREST OWNERS AND ENTREPRENEURS – THE ROLE OF DIFFERENT MOTIVES AND ROUTES

According to the results, psychological ownership also seems to influence the behaviour of both private forest owners and nature-based entrepreneurs related to the forest resources. As such, the results verify from their part the previous research related to psychological ownership conducted in other sectors (e.g. Avey et al., 2009; Brown et al., 2005; Li, 2008; O'Driscoll et al., 2006; Shu & Peck, 2011). In general, the experience of psychological ownership seems to increase private forest owners' conscious decision making related to forest management. Thus, is seems reasonable to assume that increasing forest owners' sense of psychological ownership would decrease their passivity or indifference towards their forests. Previous studies related to the link between psychological ownership and commitment towards the object of ownership (Avey et al., 2009; Brown et al., 2014b; Mayhew et al., 2007; Van Dyne & Pierce, 2004) support this assumption. From the forest owner types identified from the data, only the indifferent forest owner type can be seen as being truly passive and their psychological ownership feelings towards their forests seem to be weak (Figure 3). By increasing the experience of psychological ownership through the element of control or identity, forest owners may take a more conscious approach to forest management decisions. According to Pierce et al.'s (2003) theory, the three routes are the key to maintain and increase psychological ownership. Therefore, one might speculate that safeguarding or enhancing these routes would increase the psychological ownership of passive forest owners. However, it must be kept in mind that the characteristics of the object of ownership (forest) and the person experiencing the ownership feelings also have an influence (Li, 2008; Van Dyne & Pierce, 1993).

It has also been suggested that the tenure of ownership has an influence on the development of the psychological ownership feelings (Pierce & Jussila, 2011; Raffelsberger & Hällbom, 2009). The longer the person owns the object, the longer they have access to the three routes generating psychological ownership. In the context of private forests, the focal role of this connection may not be quite as straight forward, as the forests, at least in the Finnish context, are often an inter-generational asset. The results show that the forest owners may use the forests in their identity building as a link to the family and thus can have strong feelings towards the family forests even before their own strong involvement with the forests. On the other hand, the passive owners seem not to have generated much psychological ownership feelings, even though they have inherited their forests and might have owned them for a long time. Forest ownership is not a static state either (Butler et al., 2016, Butler et al., 2017; Karppinen, 2012). Therefore, it also seems reasonable to assume that the psychological ownership feelings of the forest owners can change over time.

In the previous literature, the role of the perceived control route in generating psychological ownership has often been discussed (Pierce et al., 2004; Pohja-Mykrä et al., 2015). This route has also frequently been highlighted in relation to participatory planning or stakeholder management in the use of forest resources (Dyer et al., 2004; Lund, 2015; Paletto et al., 2016; Thompson et al., 2005), focus often being to provide actual influence/control possibilities to certain stakeholder groups (Dyer et al., 2004; Pohja-Mykrä et al., 2015). In the context of private forests, the owner possesses actual, legal ownership of the resource. This being the case, one might hypothesize that elements with a particular influence on *perceived* control, such as social norms, lack of skills and knowledge or emotional obstacles (Fishbein & Ajzen, 2011) are actually those issues that hinder the development of the "control route" leading to forest owners' experience of psychological ownership in the privately-owned forest context. Thus, they are the issues which should be focused on in initiatives targeted, for example, at passive forest owners. The role of forest owners' social networks, knowledge and trust has already aroused much interest among researchers (e.g. Butler et al., 2007; Hujala et al., 2007; Hujala & Tikkanen, 2008; Korhonen, et al., 2012), but more knowledge of the factors influencing perceived control in the forest-owning context is still needed.

The results of this study also indicate that forest owners' knowledge of their forest, one of the routes to psychological ownership, is various in nature, and different kinds of knowledge could perhaps have an impact on the different motives behind psychological ownership. Knowledge of forest management methods and options may very well contribute to ownership feelings, especially through perceived control. However, at the same time, as also shown by previous research (e.g. Bengston et al., 2011; Boon et al., 2004), forests are used to construct identity through connections to roots, the home village and family. Knowledge of the history of forests and stories that link them to family history (for example, the owner's grandfather proposed to his grandmother there) also generate psychological ownership towards forests. This kind of knowledge likely serves identity building and provides the owner with a place in time and space.

Pierce et al. (2003) state that the motives behind psychological ownership (efficacy, identity, having a place, stimulation) are parallel and additive in nature, and that it may not always be possible to distinguish them from each other. Pierce and Jussila (2011) also conclude that each of the motives facilitates the development of psychological ownership, and only one of the motives needs to be aroused for feelings of ownership to develop (Pierce & Jussila, 2011). Even though the close links between the motives suggest that more than one motive is typically present at the same time, and thus it is difficult to verify a direct causal relation between the motives and psychological ownership (Pierce & Jussila, 2011), by studying the predominant motive that seems to be aroused in a more nuanced way, new approaches to the behavioural consequences of psychological ownership and accordingly managerial implications could, nevertheless, be found. Based on the results, some points can be highlighted.

The results of this study imply that the role of the identity motive has sometimes been underemphasized in the context of private forests and their management. For example, the results demonstrate that the way forest owners use their forests in identity building seems be linked to considerations about selling the forest. If the link between the forest and identity building is strong, then the forest is unlikely to be sold (Figure 3). The results thus support previous research underlining that forest owning is often not comparable to possessing other assets like shares or money. Instead, it is linked to many emotions and other social meanings (Grubbström, 2011; Markowski-Lindsay et al., 2016). It has been further suggested that there are more emotional links to inherited forests or family forests than those bought on the open market (Majumdar et al., 2009), which is the case with the most forests in Finland (Hänninen et al., 2011) .

It has also been suggested that the experience of psychological ownership increases responsible behaviour towards the object of ownership (Hartley et al, 2016; Hernandez, 2012; Pierce et al., 2001; Pohja-Mykrä, 2014). According to the results of this study, it can be speculated that in the context of privately-owned forests, supporting only the efficacy motive behind psychological ownership may not necessarily increase responsible use of the resource. For example, the results indicate that detached forest owners make decisions based on economically rational justifications and treat the forest holding as any other investment, whereas indifferent owners make no decisions at all. These types of behaviour may not necessarily increase responsible or sustainable use of the resource. On the other hand, forest owners with a high identity function for their forests may be more likely to consider their resources in more a responsible manner (Figure 3).

Similarly, the role of the different motives that psychological ownership serves can be discussed in relation to the psychological ownership experienced by nature tourism entrepreneurs. In addition to respecting forest owners' psychological ownership in different stakeholder management strategies, the selected strategies also reveal something about the psychological ownership entrepreneurs themselves feel towards the forests they use. If these strategies are placed in a matrix illustrating the efficacy (with the motive stimulation combined with this) and identity motives (with the motive of "having a place" combined with this), entrepreneurs using the community strategy seem to use forests both to build their identity and to promote experiences of strong control related to them. Entrepreneurs utilizing the negligence strategy often refer to themselves as responsible users of nature; i.e. they use the forest areas in their identity building but do not feel that they are in control of the areas nor aspire to such control. On the other hand, entrepreneurs utilizing the adaptive stakeholder management strategy seem to experience the least psychological ownership towards the forest areas they use. Moreover, entrepreneurs utilizing the proactive strategy possess a strong desire to control the area they use but use the forests less in their identity building (Figure 4).

In relation to nature-based entrepreneurs and their ownership feelings, using forests for identity building seems to influence what they feel responsi-

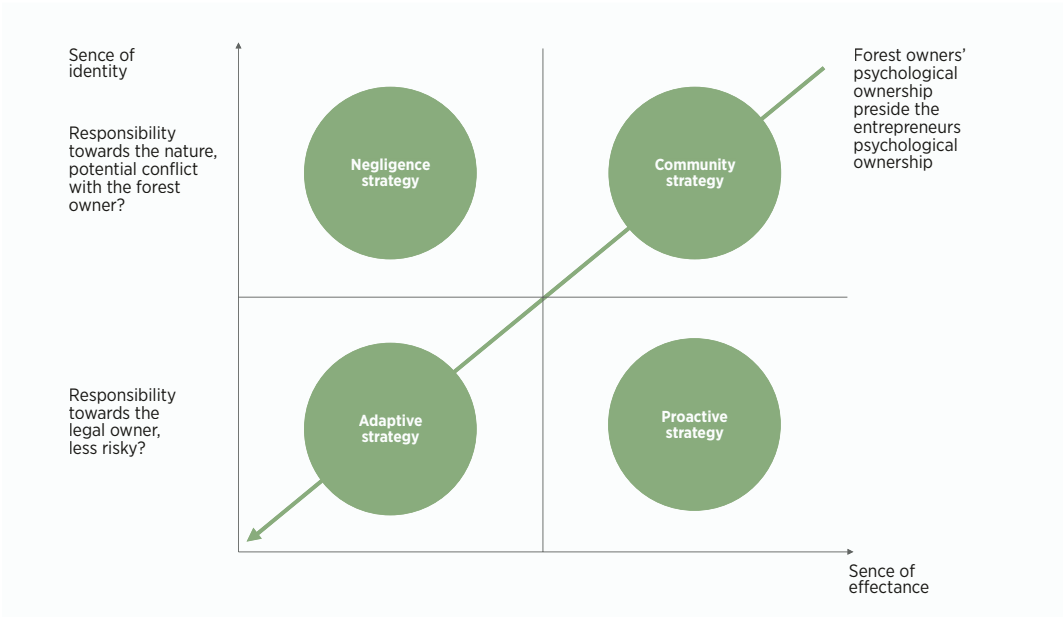

Figure 4. Stakeholder management strategies in relation to the identity and control motives of psychological ownership.

bility towards: the actual object of their ownership feelings (forest) or the legal owner of that object. Entrepreneurs utilizing the negligence or community strategies seem to feel responsibility towards the resources they use. By contrast, entrepreneurs utilizing the adaptive and proactive strategies feel responsibility foremost towards the legal owner of the resource. Thus, even though the entrepreneurs utilizing the proactive strategy might aspire to more control options, their ownership feelings may not lead to responsible use of the resource as such. Previous research related to the dimensions of place attachment (place dependence and place identity) has found that place identity, in particular, is more strongly associated with environmentally responsible behaviour (Vaske & Kobrin, 2001). This would support the findings of this study.

As the role of the identity motive as part of experienced psychological ownership seems to be important, it might be worthwhile considering it in more detail, as suggested by Hillebrand and Money (2015). According to them, a more defined structure of the identity motive, such as Higgins' (1999) *actual self*, *ideal self* and *ought self,* should be used. It is likely that the consequences for individual behaviour and influencing it are also different, depending on construction of which identity part or layer (Hillebrand & Money, 2015) the forest is used for. A person's perception of the ideal self or ought self is influenced more by social norms and therefore could be influenced by general discussion on "a good forest owner" and/or by expert assistance for forest management (Christensen et al., 2004; Goldstein et al., 2008). However, in the case of the core self, the outside influence might be more difficult (or impossible). Nevertheless, more research on the topic is needed, not only in the forest context, but also in the natural resource context in general.

7.3. RESPECTING PSYCHOLOGICAL OWNERSHIP – A WAY FOR SUCCESSFUL CO-OPERATION RELATIONSHIPS AND SOCIAL SUSTAINABILITY?

The results also show that perceived violations of psychological ownership may lead to termination of cooperative relationships or even to a conflict situation related to the use and management of natural resources. Such conflicts are especially difficult to foresee and manage, since the perceived violations that cause them are based on subjective experiences and there are no legally stipulated limits on them. However, as previous research suggests (Belton & Jackson-Smith, 2010; Pohja-Mykrä, 2014) and the results of this study (particularly Article I) support the suggestion that understanding psychological ownership could provide an interesting approach to foreseeing and managing conflicts re-

lated to natural resources. It can be further argued that in the case of co-operative relationships, such as those presented in this study between private forest owners and nature tourism entrepreneurs, where the co-operative relationship is asymmetrical and the role of economic compensation in the relationship is marginal, respecting ownership feelings might be, in fact, the critical factor for a successful relationship. For example, according to a survey by Tahvanainen and Kurttila (2017), social acceptance of commercial nature-based entrepreneurship could be achieved simply by asking for permission from the forest owners (even though to do so is not legally required) and by providing them with an opportunity to participate in the activities. According to the results of this study (particularly Article I and II), forest owners usually prohibit intensive nature tourism activities or, for example, hunting on their land if those activities challenge their priorities and values regarding the forest. Furthermore, forest owners also withhold permission if they feel that it threatens the control of their territory. Both these behaviours can be linked back to the psychological ownership. Thus, one may further hypothesize that in cases in which the experience of psychological ownership is strong, any monetary compensation for the loss or limitation of psychological ownership may be ineffective and fail to prevent a conflict situation. The nature tourism, entrepreneurs' stakeholder management strategies found in this study differed in terms of their respect for ownership feelings and the routes leading to them. Even though all the strategies worked in their own contexts, it seems reasonable to assume that companies' risk level in relation to access to natural resources would decrease along with increasing respect towards private forest owners' psychological ownership.

Indeed, conflicts caused by disrespecting the psychological aspects of ownership in the cooperative relationship can be as severe as those stemming from violations of legal ownership. Furthermore, such conflicts can also occur in the private forest context between other forest users, when neither party possesses legal ownership of the resource. For example, many small and larger scale conflicts can arise between users of Everyman's Rights over different opinions on the use of forest areas (e.g. between dog walkers and mountain bikers or between berry picker groups in the most popular picking areas) (La Mela, 2014; Peltola et al., 2014). Such conflicts typically escalate as letters to newspapers and in social media, but they can also contain elements of violence when the users of Everyman's Rights aim to harm the other user or stakeholder group's activities.

Stakeholders typically employ a range of practical-level arguments to legitimize, i.e. make socially acceptable (see e.g. Suchman, 1995), their approach to the use of natural resources. At the same time, in some instances, they attempt to stigmatize the conflicting use of the resource, i.e. to make it socially undesirable. The need for such arguments has been found to arise when coping with challenges or threats to personally-meaningful goals (Stein & Albro, 2001). Their purpose is typically to make a particular opinion acceptable to the target audience, and thus the arguments invoked may have little to do with how and why the proponent holds the opinion they are defending (Van Eemeren, 2009). The concept of psychological ownership is particularly interesting for trying to understand the primary reasons behind the arguments presented by stakeholder groups in public discussions on the use of natural resources.

In the results of this study, the interpretation of the spirit of Everyman's Rights was central in the arguments and the discussion. Both private forest owners and nature-based entrepreneurs justified their approach to cooperation because of their interpretation of Everyman's Rights or traditions of forest use. In some cases, commercial nature-based entrepreneurship was not seen as belonging to Everyman's Rights; in some cases, however, small-scale nature tourism activities were not seen to violate it. These different interpretations of Everyman's Rights are also visible in the previous studies. Even though Nousiainen and Tyrväinen (2002) found that approximately 50% of nature-based tourism entrepreneurs had encountered property-rights-related problems with private forest owners, the findings of previous research indicate that private forest owners do not see Everyman's Rights, in principle, as a problem. According to Viljanen and Rautiainen (2007), the majority (95 per cent) of private forest owners do not wish them to be limited as an institution. The same figure in a study by Tahvanainen and Kurttila (2015) regarding the region of Northern Karelia was 64%. Nevertheless, at the same time, most forest owners also hoped for some restrictions to commercial utilization and thought that they should have the right to limit activities on their forest property if they so decided (Tahvanainen & Kurttila, 2017; Väkeväinen, 2015). This tendency for desiring to limit commercial, not recreational, use has also been identified in other studies (Lehtonen et al., 2007; Peltola et al., 2014; Sievänen & Neuvonen 2011). On the other hand,

nature-based entrepreneurs justified their use of private forests by claiming it was a way to maintain the vitality of rural areas by introducing new sources of livelihood. Publicly accepted "flagship" argumentation, such as that concerning the spirit of Everyman's Rights here, can be identified in all conflicts. Behind these, however, can be found indications of safeguarding the stakeholders' sometimes quite self-centred ownership feelings and their aspiration to maintain the routes supporting psychological ownership. Thus, understanding the role of psychological ownership in the conflict situation may provide new tools and methods for finding solutions in stakeholder management.

From the managerial perspective, the idea of influencing or managing the experience of psychological ownership is, indeed, intriguing, both in relation to conflict management and in terms of influencing forest owners' behaviour (such as in the case of passive forest owners, as mentioned before). For instance, increasing local people's sense of psychological ownership of wolves has been suggested as one way to achieve conservation goals for the species (Belton & Jackson-Smith, 2010; Pohja-Mykrä et al., 2015). If locals feel a certain animal population is their own and their responsibility, they are likely to act in a more responsible way towards it (Pohja-Mykrä, 2014). However, even though strengthening an individual's or stakeholder group's experiences of psychological ownership may be achieved by supporting their access to the routes leading to psychological ownership, it may be difficult or even impossible to diminish the experienced ownership by other individuals or groups. For example, using legislative approaches to deny one stakeholder group access to the resource does not decrease their ownership feelings towards it, at least in the short term. On the contrary, this group may feel that their ownership feelings have been violated, which may cause a serious conflict. If one stakeholder's or stakeholder group's control or knowledge routes to the object of psychological ownership are blocked, they can still achieve efficacy by fighting for "their rights" (investing themselves in the target of ownership) and thereby affect their environment. This can also further support their identity building and sense of belonging (a part of "having a place"), as has been reported in many cases related to the "common enemy" (Bryan, 2004; Triandafyllidou, 1998; Wescoat, 1990). Furthermore, the fact that in these cases, monetary compensation often fails to provide a feasible solution creates challenges for policy creation (Häyrinen et al., 2016; Matilainen & Lähdesmäki, 2014).

However, it can be speculated that if the object of ownership does not strongly support the identity motive behind psychological ownership, could this more likely to lead to "disownership feelings"? Brown et al. (2005) brought out for discussion in their theoretical paper the term "disownership". In it they suggested that people may want to alienate themselves from the object of ownership and "*actively try to communicate to others that they have no relationship with objects or entities in order to protect their self-image*" (Brown et al., 2005, p. 589). However, in this case, the person him/herself initiated the process of alienation from the object of ownership. On the other hand, Jussila et al. (2015) stated that a sense of possession is likely to develop towards objects that are in close physical proximity. If the same is also valid for mental/emotional proximity as Beggan and Brown (2011) suggest, then the concept of psychological distance with its four dimensions (spatial, temporal, social and hypothetical) might prove useful for developing tools to manage psychological ownership. Moreover, picking up on the suggestion of Hillebrand and Money (2015) and Higgins (1987), the part of self-identity (core self, ideal self or ought self) to which the object of ownership is linked could provide different options for influencing the psychological ownership. The ethical aspects of this are entirely another matter. Nevertheless, it must be emphasized that the results of this study merely provide fertile ground for speculation on this topic. Further research is warranted to analyse the role of different motives of psychological ownership properly.

The existence of collective psychological ownership always entails feelings of shared ownership at an individual level (Pierce & Jussila, 2011). In stakeholder management, the existence of collective ownership feelings, the sense that "this resource is ours", is important, as it is typically impossible to respond to the demands of individuals, at least concerning wider-scale planning. In addition, to be able to create compromises or social acceptance, stakeholder groups need to be able to recognize that other groups may also have ownership feelings about the resource. In the present study, the key to a successful cooperative relationship between private forest owners and nature tourism entrepreneurs was the fact that for both parties' ownership feelings were inclusive rather than exclusive. In other words, they recognized that someone else also had feelings of ownership towards the resource in question, even if they tried to strengthen their own ownership feelings as well. In the case of this study, a privately-owned forest, legal ownership is,

nevertheless, very much connected to and influences feelings of psychological ownership. However, when the focus is a jointly owned resource, like a state forest (*res communis*) or a resource which is not actually owned by anyone (*res nullius*), such as wildlife, the role of psychological ownership in successful cooperation or co-management can be speculated to be even more significant. In fact, the three routes that generate the sense of psychological ownership seem to have some similarities with the findings of Ostrom et al. (1999) concerning her design principles (DP) for managing commons. For instance, matching the rules governing use of common goods to local needs and conditions, as well as ensuring the participatory approach to developing the rules can be linked to the control route of psychological ownership. Naturally, whether people are then able to self-organize and self-manage, i.e. have control over common-pool resources, depends on the broader social setting, such as its norms and hierarchy. The second route, intimate knowledge of the target relates to Ostrom's finding that the users have to have accurate knowledge of external boundaries and internal microenvironments and have reliable and valid indicators of resource conditions. Thirdly, in developing psychological ownership it is important to invest oneself in the target; this is also recognized by Ostrom et al. (1999), who concluded that in addition to restrictions and rules, it is important to create incentives, such as assigning individual rights or shares in the resource, for users to invest in the resource instead of overexploiting it. Therefore, the concept of psychological ownership provides an interesting perspective on the "tragedy" related to the use of common pool resources as well. Shu and Peck (2018) have already studied the connection between increased stewardship towards publicly owned resources and psychological ownership.

Based on the results of this study, it can safely be concluded that management efforts related to natural resources, including forests, should often focus more on managing the resource stakeholders than on managing the resource itself. Even in the context of privately-owned forests, due to societal demands for forests at local, regional, national and global levels, there are several stakeholder groups to be considered. Matching private forest owners' objectives with the wider demands of society is the central focus of forest management, different kinds of participatory approaches (e.g. at the regional level) and policy creation, alike. It is also a question of managing the expectations and demands of stakeholder groups. After all, it is human beings, not nature, that set these demands on the resource in the first place. Thus, such demands can, in fact, be described as socially constructed. Therefore, in solving problems or potential conflicts related to the use of these resources, the management focus should be more on social approaches and human behaviour. Even though this approach is becoming increasingly popular (Pohja-Mykrä, 2014; Redpath et al., 2013; White et al., 2009), too often grass-roots-level practical solutions still focus primarily on ecological or technical aspects. This is understandable, as the officials responsible for forest management issues or policy creation have rarely been trained in sociological or psychological approaches to environmental problematics. The education of forest advisors and professionals, for example, would benefit greatly from the inclusion of more behavioural sciences in the curriculum.

7.4. CRITICAL REVIEW OF THE RESULTS AND SUGGESTIONS FOR FURTHER RESEARCH

At the end, some critical review of the results of this study is in order. First, the study does not claim that the experience of psychological ownership is the sole or even the main reason behind all potential conflict situations that concern the use of natural resources or influencing on private forest owners' behaviour. The study fully recognizes that human behaviour is shaped by a variety of motivations. In addition, behaviour in general has been found to be context-dependent (see e.g. Fishbein & Ajzen, 2011). Moreover, as mentioned earlier, the emergence of psychological ownership has been found to be dependent both on the personal traits of the owner and on the characteristics of the object of ownership (Pierce & Jussila, 2011), and thus no general and direct causal link has been proven to exist between psychological ownership and the motives behind it. Equally, it must be emphasized that the understanding the concept of psychological ownership does not fully cover the social sustainability or stakeholder management approaches in relation to the use of natural resources. However, the application of psychological ownership to forest-owner studies can contribute a valuable new conceptual approach for broadening understanding within this research field. Indeed, several scholars have called for a more behavioural-science-based approach to forest ownership research (Ingemarsson et al, 2006; Karppinen, 1998). The psychological ownership provides one approach to this type of research.

The data and analysis methods used in this study were qualitative in nature. This approach entails certain limitations to the conclusions that can be drawn from the results. The sampling of the data is purposeful and therefore, it is impossible to estimate its representativeness. Thus, as the dataset in this type of research is typically rather small, the role of the results was more to explore the phenomenon and describe it in the Finnish private-forest-owning context rather than provide any evidence on the generalization of the results (Mason, 2010). Accordingly, based on these results is not possible to prove a generalized direct causal connection between experienced psychological ownership and its consequences for the behaviour of different stakeholder groups. Further research with a quantitative approach is needed to confirm or refute this assumption.

To illustrate the results, qualitative typologies were constructed for both private forest owners and nature-based entrepreneurs (based on the stakeholder management strategies they used) in Articles II and III. These types were made to clarify differences between private forest owners' forest management and nature-based entrepreneurs' stakeholder management strategies. Nevertheless, it should be noted that the types represent ideal types based on the data. Thus, in reality, one forest owner or nature-based entrepreneur can have characteristics from more than one of the types constructed. In addition, even when a strong sense of identity and control is felt towards one forest area, this does not necessarily mean that those feelings are similar towards another area. It is also worthwhile to note that the typologies built here are based specifically on the data of this study. However, the typology highlights the variety and complexity of the idea of ownership in the private forest context. It thus demonstrates the issues that may explain indifferent attitudes towards forest holdings or why, for example, some forest owners are more passive regarding their forest management or do not welcome new forest management innovations.

Furthermore, the research was conducted in the context of Finnish forest ownership, where timber production values may be emphasized more than in some other countries and also broader social constructs like Everyman's Rights are likely to influence the development of psychological ownership. Nevertheless, a similar phenomenon can also be expected to exist in other countries with a high proportion of private forest ownership and free public access to nature.

Before the understanding of psychological ownership can provide practical-level management tools, more research on the causal links between psychological ownership and behaviour in the context of nature resources is warranted. The role of different motives and the effectiveness of the different routes to generate psychological ownership feelings would be an interesting avenue for further research as well analysing them more in detail. For example, experimental approaches could reveal more about the mechanism behind the phenomenon. In addition, assessing changes in psychological ownership before and after different forms of interventions would provide valuable knowledge on the effectiveness of different management tools. Need for a more experimental approach and studies has also been raised by Dawkins et al. (2017) in their proposed future research agenda related to psychological ownership. In the context of natural resources, Shu and Peck (2018) have already started exploring this research avenue, but more studies on this topic are still needed. As violations of psychological ownership often cause territorial behavioural responses, they could be useful as a mediator in studying psychological ownership in natural resource conflicts, as has been done in organizational research (e.g. Brown et al., 2005; Brown & Robinson, 2011). Furthermore, other behavioural consequences of psychological ownership already established in previous research, would provide more tools for studying psychological ownership further in the context of natural resources. For example, a more profound examination of the ownership feelings of users of private forest resources based on Everyman's Rights would create a new understanding of forest-use conflicts.

Even though psychological ownership is manifested at the individual level, it also has collective elements (Pierce et al., 2018; Pierce & Jussila, 2011). Therefore, to understand the stakeholder groups in relation to natural resources better, it would be interesting to study in more depth how collective psychological ownership is formed in this context. The same goes with shared ownership, as it is paramount to enabling the several stakeholder groups to utilize the same forest resource. Also, as social norms play a significant role in shaping attitudes (Fishbein & Ajzen, 2011) and can also play an important part in generating shared ownership, or expectations towards it, research in this context would provide valuable information on the managerial potential of psychological ownership.

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